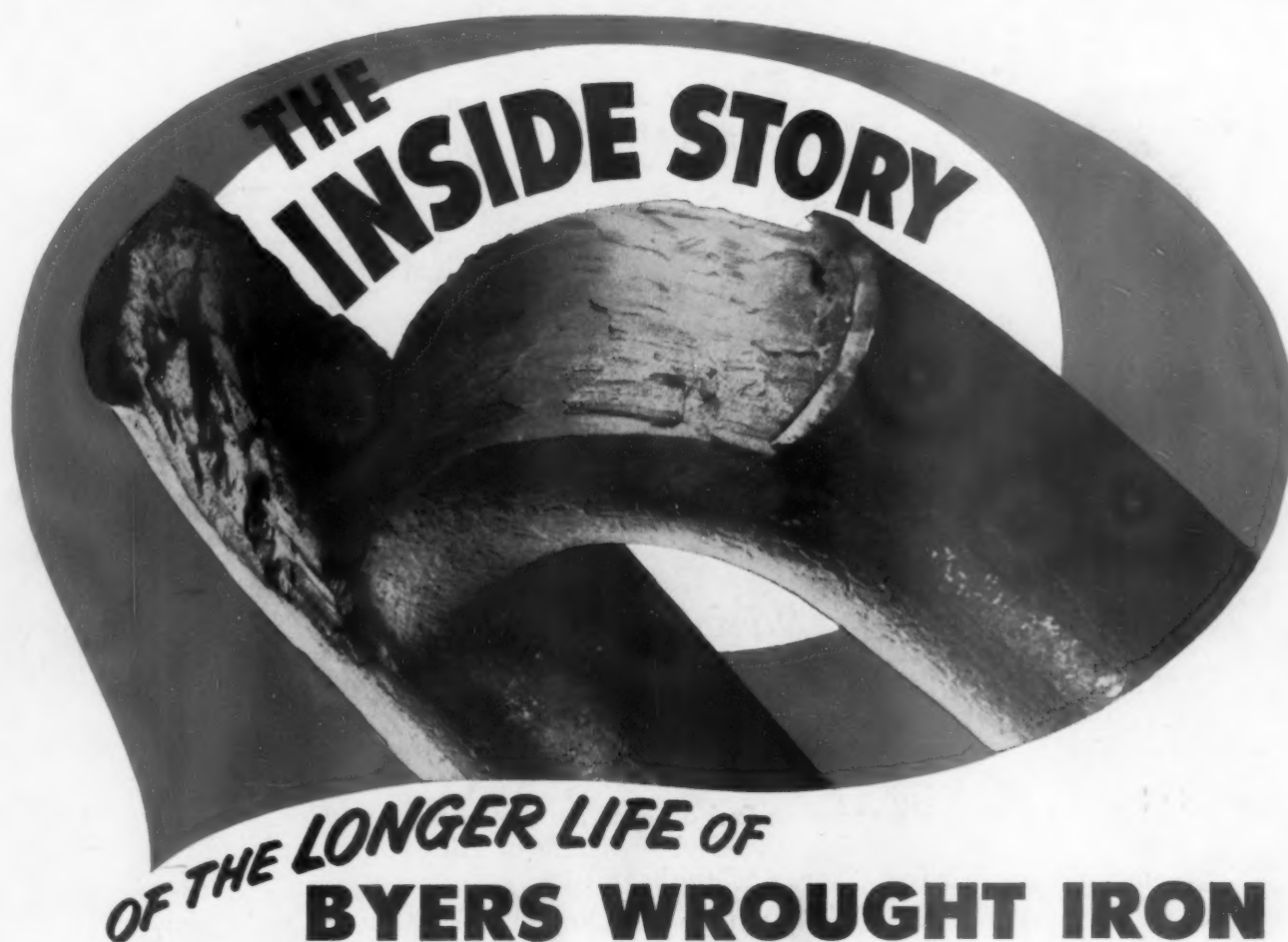


RAILWAY AGE

THE STANDARD RAILROAD WEEKLY FOR ALMOST A CENTURY

FREIGHT TRAFFIC ISSUE

NOVEMBER 4, 1950



OF THE LONGER LIFE OF BYERS WROUGHT IRON

The hickory-like break in this wrought iron notch-fracture test specimen tells a lot about the material's unusual physical properties.

The tiny threads of glass-like silicate slag threaded through the body of high-purity iron give a structure like stranded wire cables. This equips wrought iron to withstand sudden shock, and resist fatigue induced by continuing vibration.

Of even more importance in the average application . . . these fibers also equip wrought iron to fight

corrosion. If you could watch the progress of corrosive attack under a powerful microscope, you would find that it first worked on the entire surface . . . then localized and ate inward. When it reached a slag fiber, this march would be halted.



Corrosion is now "detoured." It progresses right and left to the end of the fiber, bores inward again . . . and encounters the second line of defense. Pitting and rapid pene-

tration, which generally are the cause of failure in ordinary materials, are combated . . . and so wrought iron stays on the job longer.

Our booklet, **THE ABC'S OF WROUGHT IRON** gives added details. Ask for a copy.

A. M. Byers Company, Pittsburgh, Pennsylvania. Established 1864. Boston, New York, Philadelphia, Washington, Atlanta, Chicago, St. Louis, Houston, Salt Lake City, San Francisco, Export Division: New York, New York.

BYERS

CORROSION COSTS YOU MORE THAN WROUGHT IRON
WROUGHT IRON
TUBULAR AND HOT ROLLED PRODUCTS
ELECTRIC FURNACE QUALITY ALLOY AND STAINLESS STEEL PRODUCTS



Nalco SR-155

FUEL OIL ADDITIVE

ELIMINATES
SANDING
In Oil-Fired
Steam Locomotives

NALCO SR-155 is a complete fuel oil additive that improves overall efficiency; offers savings in fuel, maintenance and repair. Major railroads now adding small quantities to their fuel oil are finding that SR-155:

- (1) Eliminates sanding, thus reducing firebox refractory maintenance and front end cleaning costs.
- (2) Prevents sludge and gum deposits in tanks, lines, strainers and burner nozzles.
- (3) Fluidizes old sludge deposits.
- (4) Prevents soot and carbon formation in firebox and flues.
- (5) Acts as a combustion catalyst to insure complete burning of the oil.

Sounds like a big job for a single additive, doesn't it? But proof can be quickly provided on your locomotives or stationary boilers. Write direct to Nalco for further details.

NATIONAL ALUMINATE CORPORATION
6200 West 66th Place • Chicago 38, Illinois
*Canadian inquiries should be addressed to
Alchem Limited, Burlington, Ontario*

A *Nalco*

PRODUCT • Serving Railroads through Practical Applied Science



for an

XII

Ride

THAT
Protects
LADING
AND
ELIMINATES
DAMAGE
CLAIMS

THE *New* MINER

XII *Ride*



Snubber CLASS C-4-S

W. H. MINER, INC., CHICAGO





*Actual size photograph
of a roller from a HYATT
Railroad Bearing*

LARGE SIZE

Straight Radial Rollers For Greater Capacity and Longer Life

The large straight cylindrical rollers in Hyatt railroad roller bearings provide a greater area of contact between the rolling elements of the bearing and consequently greater load carrying capacity for longer life expectancy.

The loads imposed upon railroad journal boxes are predominately radial. Hyatt journal boxes handle radial loads in the most direct manner with straight cylindrical bearings.

No radial load carrying capacity is sacrificed by attempting to absorb thrust loads through the bearing itself.

Intermittent thrust loads are handled sep-

arately and adequately by a special analysis bronze thrust block operating against the smooth ends of the axles.

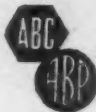
This design provides longer fatigue life and a minimum of maintenance. These easily removable journal boxes with all parts completely accessible for cleaning and inspection have led more and more railroads to conclude that "It's Easier With Hyatts."

Write for our new Journal Box Visualizer and demonstrate these advantages for yourself. Hyatt Bearings Division, General Motors Corporation, Harrison, New Jersey.

HYATT ROLLER BEARING JOURNAL BOXES

RAILWAY AGE

With which are incorporated the Railway Review, the Railroad Gazette, and the Railway-Age Gazette. Name Registered in U. S. Patent Office and Trade Mark Office in Canada.



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THE "UNION" CAR RETARDER

**SPEED CONTROL SYSTEM
GIVES YOU PROVED
DEPENDABILITY!**



The "Union" Car Retarder Speed Control System automatically regulates the speed of cars passing over the two track scales.

A series of short single-rail track circuits throughout the car retarder are used for making car speed measurements.

Short Single-Rail Track Circuits

An all-relay type mechanism automatically translates car speed measurements into proper car retarder action to produce desired results.

The dependability of the "Union" Car Retarder Speed Control System has been proved at E. B. Roanoke Classification Yard of the Norfolk and Western Railway Company, where it has been used for 8 years to regulate the speed of cars approaching the track scales.

Before a car enters the retarder, the operator merely positions the control lever to select the speed at which the car is to leave the retarder. Regulation of the retarder pressure to produce the desired speed is then automatically accomplished by the speed control system while the car passes through the retarder. A definite, high degree of accuracy is obtained in the regulation of car speeds.

We'll be glad to tell you more about the "Union" Car Retarder Speed Control System . . . show you how you can use it in your retarder yard. Just ask our nearest district office.



UNION SWITCH & SIGNAL COMPANY

SWISSVALE



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WEEK AT A GLANCE

EQUIPMENT BUSINESS BOOMS: The dollar value of equipment ordered in this year's first 10 months exceeds equipment expenditures by Class I railroads in any 12 months of the preceding 28 years, with only one exception, according to A.A.R. figures. And when additional orders reported in the Equipment and Supply News columns of this issue alone are added to the 10-month figure, the 1950 total, with eight weeks still to go, is already the highest on record. The 1950 orders (not including those reported this week), add up to 113,345 freight-train cars (also one of the highest totals recorded in at least 40 years), 42 passenger-train cars, and 2,349 locomotive units—2,322 of them Diesels. A summary of equipment purchases, and a 10-month tabulation of freight car orders, are published on pages 53 and 54, while the usual monthly summary of equipment orders, for October, appears in the News. The prospect for still more freight cars is the theme of the leading editorial.

CAR STEEL ASSURED: Responding to the request of the Defense Transport Administration, the National Production Authority has established a program to provide, during the first quarter of 1951, enough steel and steel products to permit monthly construction of 10,000 new freight cars, and for "adequate" repair and maintenance of existing cars. D.T.A., although "gratified" at the "speedy" action of N.P.A., has warned that the three-month schedule is "only the first step in the right direction," and has reiterated its previous statement that 227,400 new freight cars are going to be needed between now and June 30, 1952. Meantime, Chairman Arthur H. Gass, of the A.A.R.'s Car Service Division, anticipates a continuing heavy demand for cars during the remainder of the present year—which seems to support the D.T.A. position. The steel program and Mr. Gass' statement are the subjects of news stories in this week's issue.

TOWARD LOWER CLAIMS: Strongly indicative of the railroads' continuing interest in cutting down loss and damage to freight are the efforts described in two of this week's feature articles. In one, on page 56, C. E. McCarty, manager of Washington, D. C.'s big Potomac yard, tells how intensified supervision, plus use of car retarders, has substantially reduced damage to both cars and lading. In the other, on page 55, is a description of an easily applied paper lining being successfully used in box cars by the Illinois Central to insulate lading against contamination, make cars grain tight and prevent the tearing of sacked freight.

"I'VE BEEN WORKING ON THE RAILROAD:" That might well become the theme song of industrial radio communication, judging from the extent to which radio, in one form or another, is going into railroad use. Its application by the Burlington to speed up switching service in the Kansas City area is described on page 58; while the importance of new communications developments to railroads generally is well summarized in our News report of a talk to the A.A.R. Communications Section by J. W. Barriger, Monon president. Incidentally, the benefits of radio are not con-

fined to big roads alone; the Washington & Old Dominion thinks enough of its advantages to have ordered complete radio equipment for all its freight and passenger trains. (See News section.)

WHAT ARE "EXCESS PROFITS?" "Excess profits taxes should be paid by the regulated railroads only upon earnings that exceed a return of 6 per cent on their invested capital," the A.A.R. has declared in a memorandum filed with a Congressional joint committee, with the Treasury Department and with the Bureau of Internal Revenue. "No relief," the A.A.R. emphasizes, is proposed "from payment of normal taxes and surtaxes upon all taxable net income. . . . It is proposed only that so-called 'excess profits' taxes shall not be permitted to impinge upon the earnings of the railroads below the level of a 6 per cent return upon their invested capital after normal and surtax exactions." Supporting arguments for the A.A.R. stand, as quoted from the memorandum, are set forth in more detail in our News summary of the proposal.

TRANS-FLO: Especially designed for efficient and sanitary bulk transportation of flour and many other dry, granular or powdered commodities is the General American Transportation Corporation's Trans-Flo covered hopper car—some 25 of which, now in flour service, have demonstrated important advantages and economies. The car, and some features of its operation and its economies, are described in the illustrated article which starts on page 61.

PRICE OF GOVERNMENT OWNERSHIP: It cost British taxpayers more than \$58 million to make up the deficits incurred by government operated transportation activities in the "tight little isle" during the calendar year 1949, according to the annual report of the British Transport Commission. And that is without allocating so much as a "thripenny bit" to general reserve or replacement funds. The price of socialized transportation has gone up heavily—nearly four and one-half times—since 1948, when the B.T.C.'s overall loss was a mere \$13 million. Comparative figures for the two years are summarized in the News section.

NEWS ROUND-UP: Freight claim bill for first six months of 1950 shows 29.3 per cent drop below corresponding period of 1949.—U.S. Chamber of Commerce suggests cures for freight car shortage.—Program for annual meeting of American Society of Mechanical Engineers.—New York, Susquehanna & Western orders 16 passenger coaches.—Week's freight car orders total 6,720 units.—Pennsylvania "streamlines" operations by elimination of five grand divisions and consolidation of other operating divisions, with numerous resulting personnel changes.—New York Central announces further improvements in l.c.l. freight service.—Northwest Shippers Advisory Board urges railroads to "grow with national economy."—Ann Arbor buys 20 Diesels.



Workhorse of the M. & St. L.

No. 950 is one of 34 handy 1,000-horse-power Diesel-Electric Locomotives now in service on The Minneapolis & St. Louis Railway.

The power of 34,000 horses is packed in the motors of these all-purpose locomotives, ready to switch cars or pull light trains.

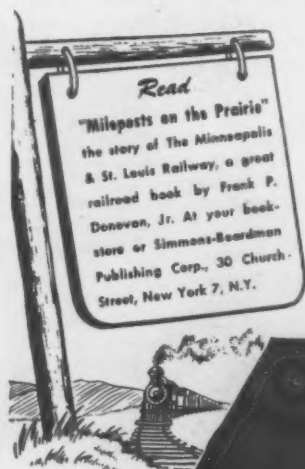
Delivery of four more of them in the fall of 1950 has meant the passing of the last good old M. & St. L. steam engine.

The M. & St. L. has bigger and faster Diesels—more every year—but none can beat these combination road-and-switching locomotives for all-round efficiency. All over the Railway, they are helping the M. & St. L. furnish

Fast Dependable Freight Service

- For Shippers and Receivers in the Midwest
- For Connecting Roads, via Peoria and other Gateways

Diesels now Power all M. & St. L. Freight Trains



The Minneapolis & St. Louis Railway

Traffic Offices in 36 Key Cities

What *important* thing

was necessary



to change **THIS**

On mountainous terrain of a major southern road, 16 4-unit Diesels now handle the tonnage formerly hauled by 100 of the road's heaviest steam locomotives.



to **THIS**

Dependable Fuel Injection

Diesel power was already *available* when most of the steam locomotives in use today were being built. But it was a sleeping giant. One vital element was necessary to make this efficient, economical source of power universally applicable — *dependable solid fuel injection equipment*.

American Bosch pioneered in this field. Constant development and field engineering, meticulous craftsmanship and precision manufacture, and a world-wide network of authorized service stations have maintained American Bosch leadership . . . and given owners of American Bosch-equipped engines advantages no maker or user of Diesels can afford to overlook.

American Bosch

Dependable Fuel Injection for the Diesel Industry
AMERICAN BOSCH CORPORATION, SPRINGFIELD 7, MASS.

Magnetos • Generators • Voltage Regulators • Ignition Coils • Electric Windshield Wipers • Diesel Fuel Injection Equipment

1.- Development and Field Engineering.

American Bosch engineering departments and laboratories work constantly to improve existing products, develop new ones such as the revolutionary single plunger multi-cylinder PSB Pump. American Bosch field engineers work hand in hand with engine and equipment manufacturers — from original design to test models and actual field operation.

2.- Precision Manufacture.

The knowledge and craftsmanship that made solid fuel injection a reality . . . plus engineering research, proven techniques, unparalleled production and testing facilities (many of them initiated and developed here) . . . insure uniform adherence to the highest standards of accuracy and performance.

3.- Service Organization.

In many U.S. cities and at strategic points throughout the world, American Bosch maintains an ever-growing network of authorized service stations. Staffed by personnel trained to factory standards, with factory-designed and built testing equipment, they are prepared to render efficient and reliable service whenever needed.

Do you know why these ladings travel in tank cars of Alcoa Aluminum?

ACETIC ANHYDRIDE

AMMONIUM NITRATE

BUTYRALDEHYDE

TRICHLOROBENZENE

WATER WHITE ROSIN

NAPHTHENIC ACID

GLYCERIN

NITRIC ACID

FORMALDEHYDE

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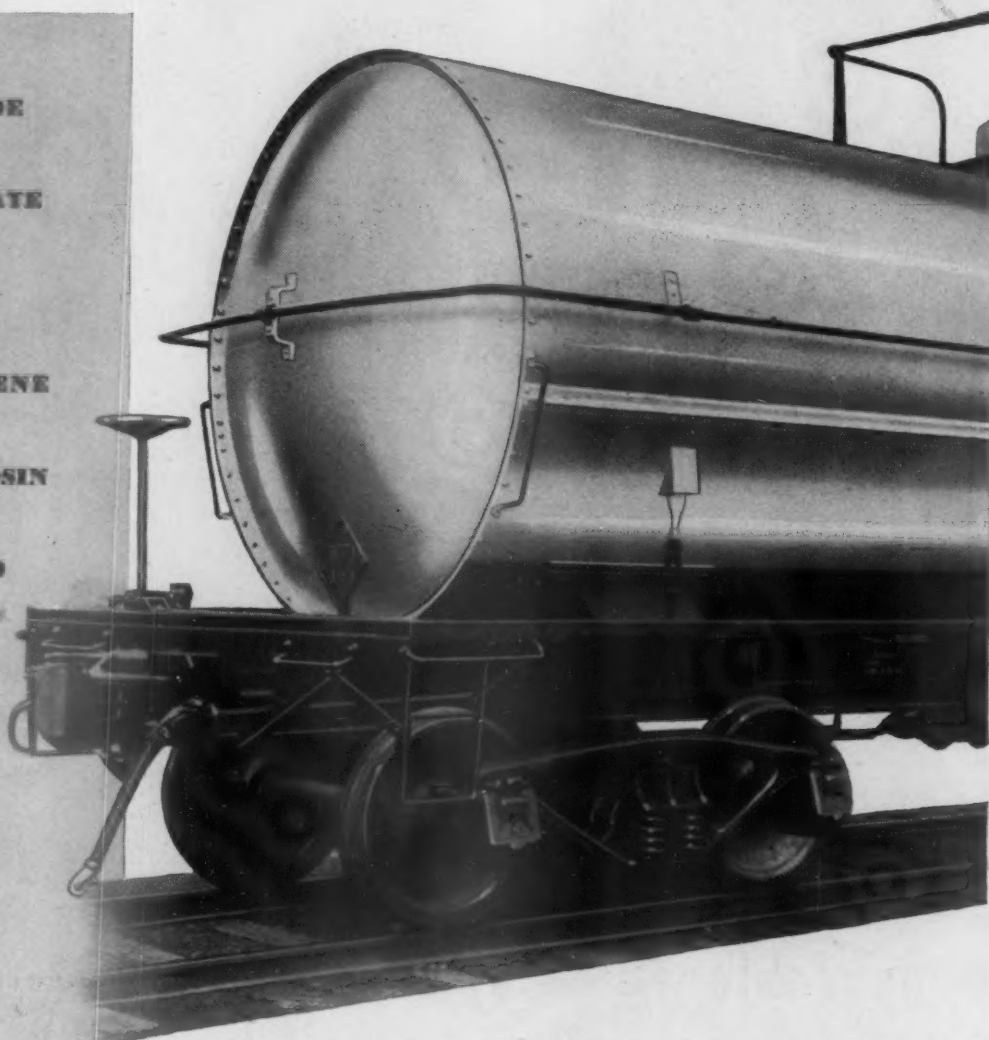
FATTY ACIDS

HYDROGEN PEROXIDE

GLACIAL ACETIC ACID

NYLON SALT SOLUTION

NITROGEN FERTILIZER



Two important advantages explain the rapid swing to aluminum tank cars for shipping many valuable liquids:

NO DAMAGE TO LADINGS—Aluminum does not contaminate or discolor sensitive liquids. Does not promote decomposition of chemicals.

NO DAMAGE TO CARS—Many acids and other ladings which corrode ordinary tanks have no effect on aluminum.

In addition, aluminum tanks are nonsparking, require far less painting and maintenance than conventional tanks. Perhaps aluminum is the answer to your shipping problem. Ask your tank car builder for full information. Or write ALUMINUM COMPANY OF AMERICA, 1816L Gulf Building, Pittsburgh 19, Pennsylvania.

ALCOA

First in Aluminum

THE METAL THAT LASTS





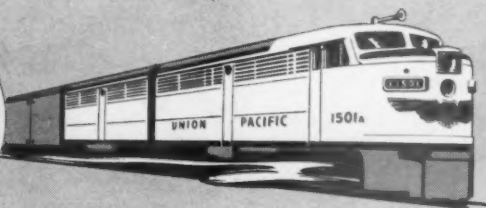
Clear Field ahead!

Opening the way for the ball carrier requires 100% teamwork, with every man knowing and doing his job. It's very much like getting your freight shipment through without interruptions and delays.

That's where it pays to have the proper facilities, manned by experienced men, such as Union Pacific's classification yards.

At these yards, freight cars are sorted and grouped (or classified) according to their respective destinations. Modern equipment and methods cut switching and sorting time in half.

This is one phase of efficient operation whereby the way is cleared for your freight to proceed rapidly to its destination.



BE SPECIFIC: *Ship* UNION PACIFIC

Unicel and its advantages

Stronger, tougher, lighter UNICEL will carry bigger payloads with more safety!

UNICEL costs less to build, operate, and maintain!

UNICEL loads and unloads more easily...saves you time and money!

Completely new, more effective mechanical refrigerating unit and "Cold-Wall" construction quickly converts UNICEL from box to refrigerator car!

UNICEL protects shipments from extreme heat and bitter cold better than ever before!

UNICEL is easier to clean and keep clean!

It costs you less to buy, or rent a modern UNICEL car!

To railroads, to manufacturers, and to consumers, money-saving UNICEL makes good sense!



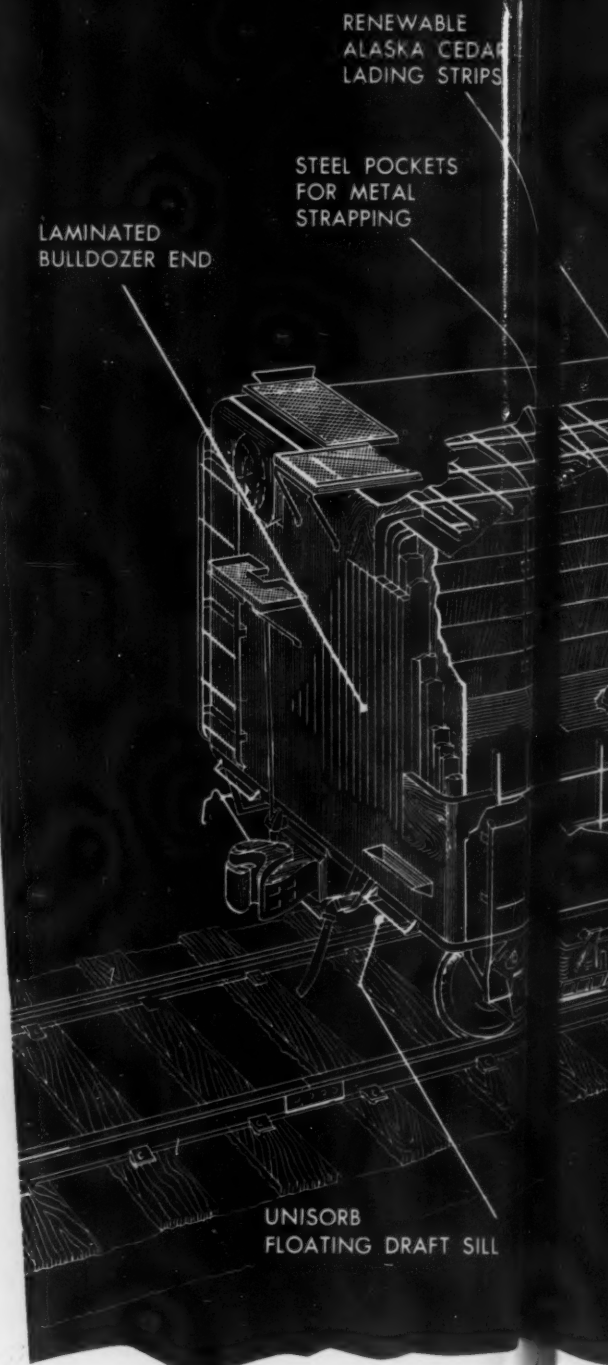
PIONEERING ONCE AGAIN, Pressed Steel Car Company—originator of the first all steel hopper car and the first all steel box car—now presents a revolutionary new concept in railroad car building. Pressed Steel Car Company engineers have successfully applied the modern science of cellular laminates to the solution of modern railroading problems. They combined lightweight, special-strength woods, phenolic and resorcinol resins, and insulators... applied tremendous pressures... and created a product that, pound for pound, is *stronger than steel*. As box or refrigerator car, it is lighter, more durable, and carries a bigger load than any car now on the rails. To busy American railroads, looking for fast, safe, and economical transport,

Pressed Steel Car Company offers this radically new design.

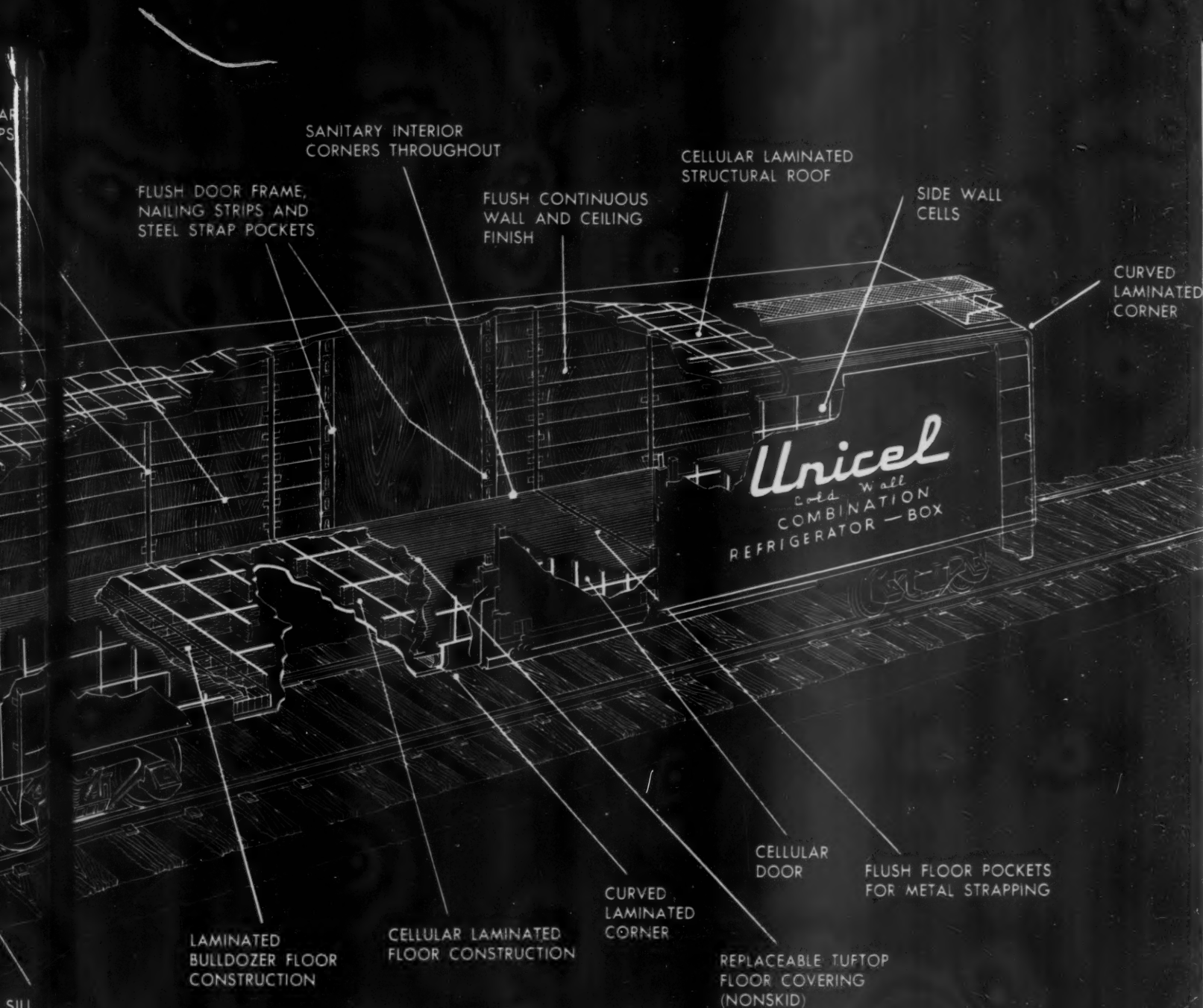
Engineering-wise, it is the car of tomorrow—today!



Write us on your business letterhead for complete details about UNICEL.



...and



Here it is!

Unicel



Laminated Structures Division
Pressed Steel Car Company
 Chicago, Illinois

Unicel was designed and built by men who know railroading . . . executives and railroaders who feel that the final test is performance. Into its development went exhaustive case studies of freight damage, thorough and intensive research, all the hard-earned knowledge of men who have to handle the car. Now the final product stands ready to serve the railroads in the busy days that lie ahead. It has been tested and proven. For Pressed Steel Car Company, it is another notable first in the development of modern railroading!

FIRST with the all steel hopper car! (1897)
 FIRST with the all steel box car! (1914)
 FIRST again with UNICEL! (1950)

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Uncovered Half a World...



Vasco Nunez de Balboa blazed a path across Panama in 1517. He opened the way to the Pacific and a vast new world. But that, at the time, was not understood. So, finally, Balboa was executed.

PORUS-KROME* *Opens the Way to MORE DIESEL ECONOMY!*

Diesel users are more appreciative of Porus-Krome than the Spanish king was of Balboa's discovery. But then, the king lacked facts by which to judge the value of what Balboa had done.

About Porus-Krome, of course, the facts are known. Now that Vanderloy M has been added, there is no excuse for scrapping *any* Diesel liner. That means, *all* your present liners can last indefinitely.

Gone are the costs of oversizing, of stocking, handling and storing oversize parts. No need for loss in engine availability, for lower combustion and lubrication efficiency resulting from *unprocessed* liners.

In the 10 years since Porus-Krome first proved its value, major Diesel users have shown increasing profits from this process. That's why they specify it in original equipment and use it 100 percent.

If *you* don't, it must be because you haven't the facts. Those facts are waiting for you. Get in touch with us today.

★ ★ ★

*PORUS-KROME is a dense, hard, wear and corrosion-resistant chromium, produced by the Van der Horst Corporation of America, and which gives working surfaces an infinite number of tiny oil-retaining reservoirs for perfected lubrication

VAN DER HORST CORPORATION OF AMERICA • OLEAN, N. Y.

U. S. PATENTS 2,048,578, 2,314,604 and 2,412,698

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Good for the Life of your Engines



*The Logical Installation
for all Freight Equipment*



INTEGRAL HEADS

Stronger. Lighter. One-piece construction—nothing can shake loose. Truss and applied force are parallel to rail. Heads, end-supports, and delivered force are radial with wheel.



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Certificate No. 54

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BEAM



**AMERICAN
STEEL
FOUNDRIES**

MIND MARK OF FINE CAST STEEL

GUARD YOUR DIESELS

Wheel
SPIN

Wheel
SLIDE

Wheel
LOCK-UP

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AGAINST...

...with the **NEW**

3 in 1

American Brake Shoe Controller

The American Brake Shoe Controller gives 3 in 1 protection for diesel locomotives because it:

- ① Detects and corrects spin promptly at all speeds.
- ② Detects and corrects sliding during braking.
- ③ Detects and warns if wheel becomes locked.

The American Brake Shoe Controller is not new. Proven through years of service on high-speed passenger car and locomotive equipment, it is now adapted to give 3 in 1 wheel protection on diesel locomotives. American Brake Shoe Company, 230 Park Avenue, New York 17, N. Y.

AMERICAN

Brake Shoe

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BRAKE SHOE AND CASTINGS DIVISION



Write for National C-1 Truck Circular No. 5150. The National Malleable and Steel Castings Co., Cleveland 6, Ohio.

Seven basic design and construction advantages of National C-1 Trucks help you deliver merchandise on time and in good order—for greater good will from your shippers and receivers.

For a smoother, safer ride . . . depend on NATIONAL Lading-Conscious C-1 Trucks—they protect your equipment, your roadbed and the interests of your customers.

NATIONAL

- 1 Quick Easy Visual Inspection**—Gives immediate assurance that friction control mechanism is functioning properly, without time delays or cost of handling or removing a single part.
- 2 Friction Mechanism In Side Frame**—Simplifies control of lateral and vertical truck motion.
- 3 Large Wedge Bearing Surfaces**—Wear is minimized because bolster is protected by hardened-steel wear plates.
- 4 Low-Stressed Wedge Springs**—Low-rate wedge springs are cold-wound and shot-peened for extra fatigue resistance.
- 5 Full Box-Section Bolster**—Bolster has maximum strength and rigidity because it is a full box-section from end to end . . . is not recessed or notched for friction control mechanism.
- 6 Spring Deflections**—Springs of $2\frac{1}{2}$, $3\frac{1}{16}$, $3\frac{1}{4}$ or 4-inch deflection can be used.
- 7 Wedge Aligning Lugs**—Four wedge aligning lugs integrally cast in the top of each journal box protect journal bearing lugs against peening and breaking.

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Lading-Conscious C-1 TRUCKS

reduce damage claims . . .

protect your equipment

NATIONAL

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FOR TRANSPORTATION
AND INDUSTRY



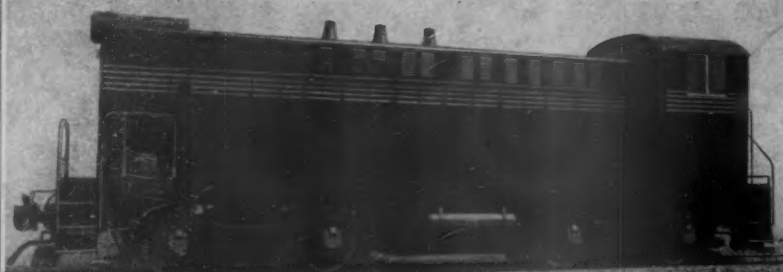
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JOURNAL BOXES AND LIDS



800-hp. Switching Locomotive.



1200-hp. Switching Locomotive.

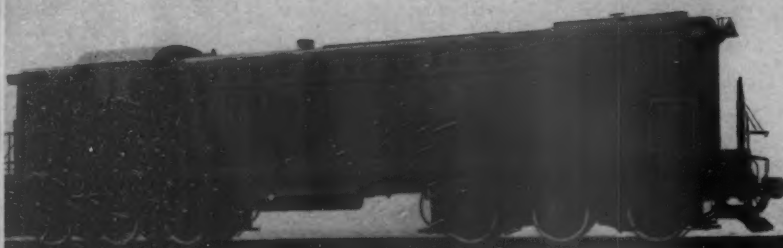
NEW

BALDWIN - Westinghouse Line

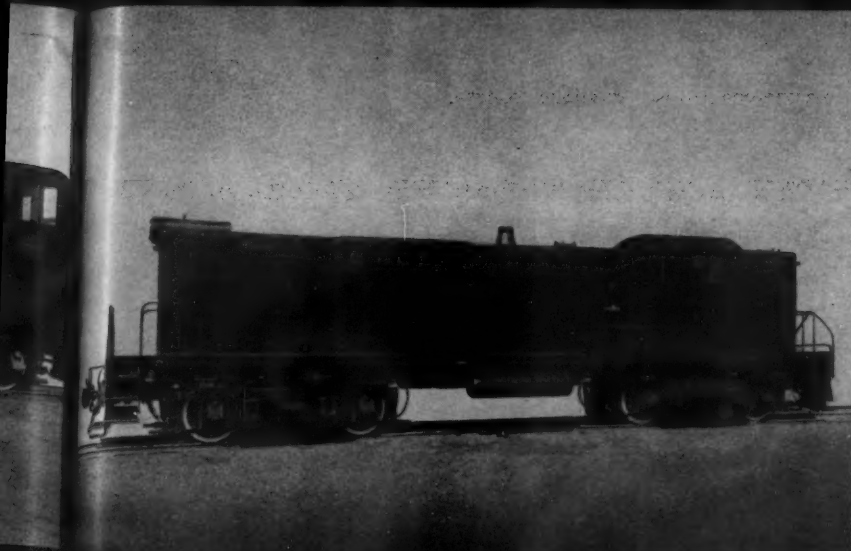
offers increased horsepower and
tractive effort ratings

1600-hp. All-service Locomotive, 6-wheel trucks, 4 traction motors.

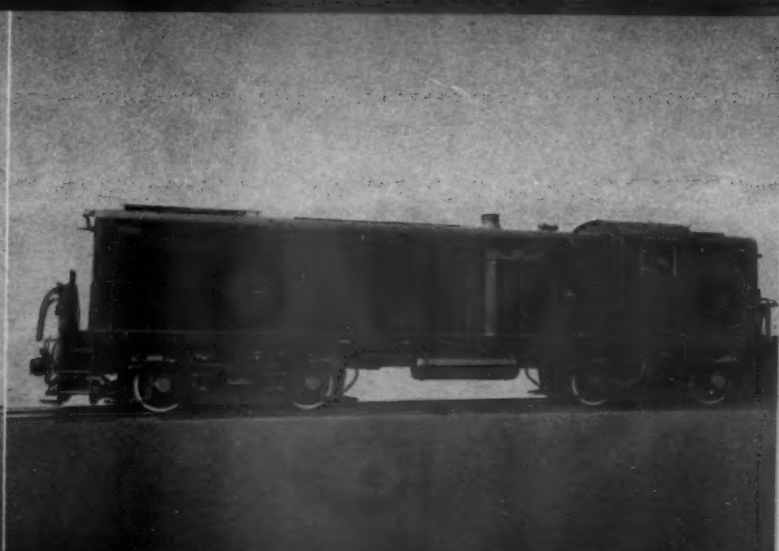
1600-hp. All-service Locomotive, 6-wheel trucks, 6 traction motors.



BALDWIN - Westinghouse



1200-hp. Road Switching Locomotive.



1600-hp. All-service Locomotive; 4-wheel trucks.

Baldwin-Westinghouse diesel-electric locomotives now offer increased horsepower and tractive effort ratings, resulting in improved performance characteristics in all classes of service. At the same time, interchangeability of parts between older Baldwin-Westinghouse locomotives and the new units has been maintained.

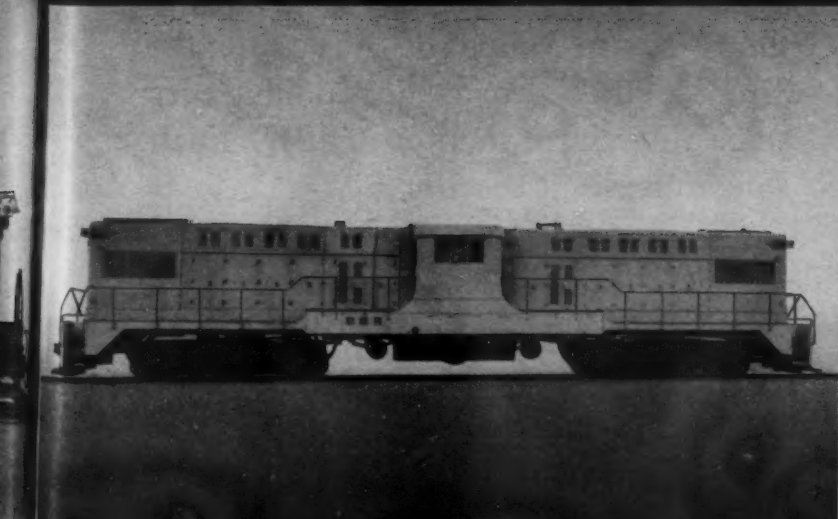
The new standard line includes: 800-hp. and 1200-hp. switchers; 1600-hp. all-service locomotives with either 4- or 6-wheel trucks and with either 4 or 6 traction motors; a 2400-hp. road transfer locomotive; and 1600-hp. road units which can be operated in multiple to form 3200-hp., 4800-hp., or 6400-hp. locomotives. These units represent horsepower available for traction.

Optional gear ratios are offered in the 1600-hp. all-service locomotives, in the 2400-hp. road transfer locomotive, and in the 1600-hp. road locomotive units, permitting a wider latitude in the selection of a type best suited to a particular service.

Our representatives will welcome the opportunity to assist you in making this selection.

2400-hp. Road Transfer Locomotive.

6400-hp. Road Locomotive made up of four (4) 1600-hp. units.



DIESEL-ELECTRIC LOCOMOTIVES

Orders, orders...and reorders

for PS-1...*a quality box car
efficiently produced*

Calling the roll is sufficient. Here are the railroads whose orders and reorders give convincing testimony to the high quality of the PS-1 box car. These

thirty-seven railroads have bought 37,625* of these sturdy, dependable cars since their introduction in 1947. Each star indicates a reorder.

Pullman-Standard

CAR MANUFACTURING COMPANY

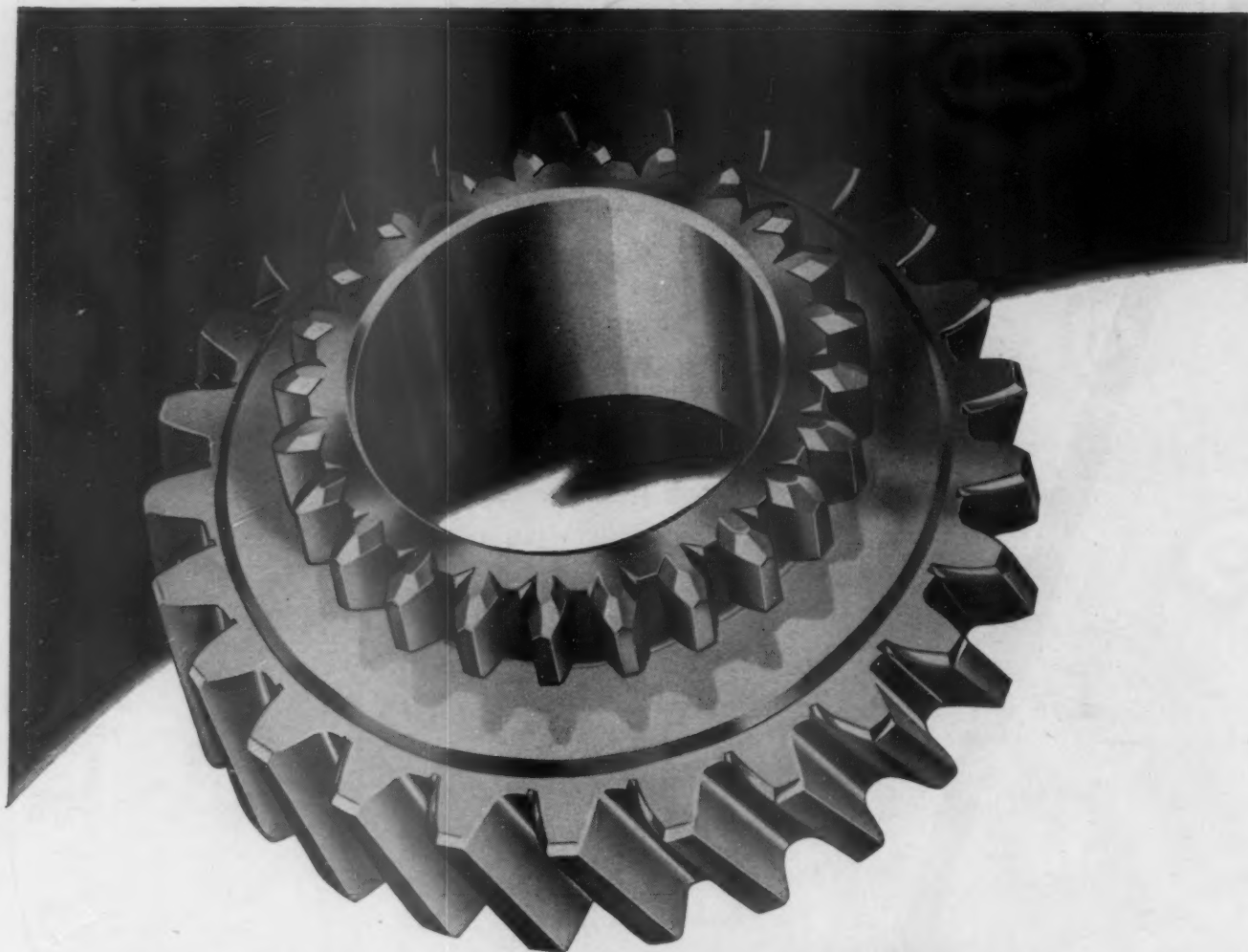
CHICAGO • NEW YORK • CLEVELAND • WASHINGTON, D. C. • PITTSBURGH
BIRMINGHAM • SAN FRANCISCO

*As of October 15, 1950

Akron, Canton & Youngstown
Atchison, Topeka & Santa Fe ★
Atlanta & West Point
Birmingham Southern
Boston & Maine ★★
Canadian Pacific
Chesapeake & Ohio ★★
Chicago & Eastern Illinois
Chicago Great Western ★
Chicago, Indianapolis & Louisville ★
Chicago and North Western ★★★★★
Chicago, Rock Island & Pacific
Chicago, St. Paul, Minneapolis & Omaha
Copper Range ★
Delaware & Hudson ★
Delaware, Lackawanna & Western
Duluth, South Shore & Atlantic
Grand Trunk Western
Green Bay & Western
Kansas City Southern ★
Lake Superior & Ishpeming
La Salle & Bureau County
Lehigh Valley ★
Louisville & Nashville ★★
Maine Central
Mississippi Central
Missouri—Kansas—Texas
New York Central ★★
New York, New Haven & Hartford ★★
Nickel Plate ★★
Norfolk & Western
Pittsburgh & West Virginia
Savannah & Atlanta
Seaboard Air Line ★★
Southern ★★
St. Louis—San Francisco ★
Union Pacific

MEMO

In building the PS-1, standardization never holds back progress. Dozens of improvements have been adopted since the first PS-1 rolled off the production line in June, 1947.



Get Increased Gear Production with High-Quality Alloy Steels

The extreme precautions that Bethlehem takes in manufacturing gear steels pay off handsomely with increased production in our customers' plants.

These steels are as clean, and as uniform in analysis as modern methods can make them. Surface flaws, internal voids, and non-metallic inclusions are held to the minimum, while chemical compositions and grain size are rigidly controlled.

Freedom from voids or surface flaws reduces the possibility of the steel

splitting or opening up during forging.

The absence of inclusions adds greatly to the life of cutting tools and increases the percentage of acceptable pieces machined per tool.

Controlled analysis and grain size insure uniform response to heat-treatment and minimize distortion that would be cause for rejection.

Bethlehem manufactures both carburizing and oil-hardening types of gear steels. Full information on these or any of the AISI grades is readily available.



BETHLEHEM STEEL COMPANY, BETHLEHEM, PA.

On the Pacific Coast Bethlehem products are sold by Bethlehem Pacific Coast Steel Corporation
Export Distributor: Bethlehem Steel Export Corporation



BETHLEHEM **ALLOY** STEELS

To Save $\frac{1}{3}$
or more in shipping time:

use →

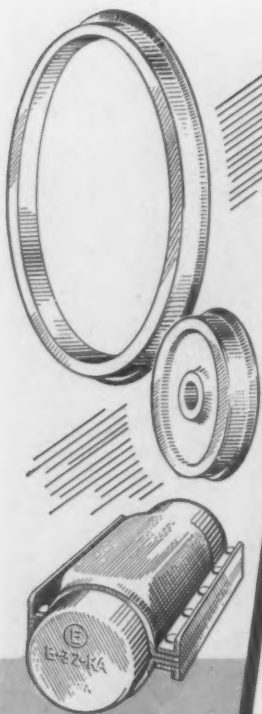


A streamline LCL operation that
provides door-to-door schedules
with Sentinel Service dependability

For details—ask our man!

**BALTIMORE & OHIO
RAILROAD**

CONSTANTLY DOING THINGS—BETTER!



We will be glad to send you enlarged copies of this Hungerford cartoon (without advertising copy) for posting on your office and shop bulletin boards, or a cut for your company magazine, at cost.



Watch for other railroad cartoons by Mr. Hungerford

Edgewater Steel Company

Serving America's Railroads with . . .

ROLLED STEEL TIRES
ROLLED STEEL WHEELS
DRAFT GEARS

P. O. Box 478
Pittsburgh 30, Pa.



Illinois Central Provides



Improved Methods

OF TRACING FREIGHT SHIPMENTS

When shippers ask us for quick information about freight shipments, our Service Bureau provides it promptly.

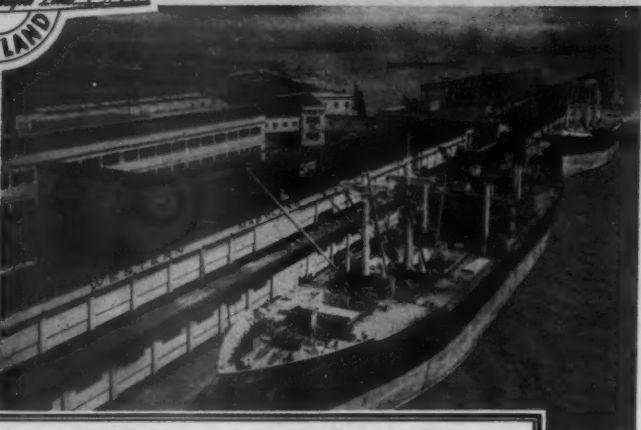
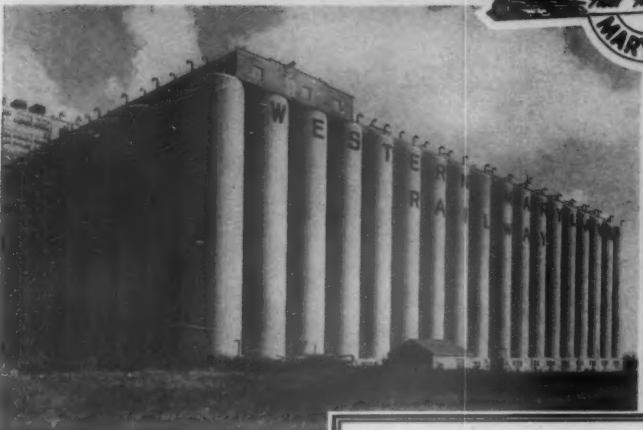
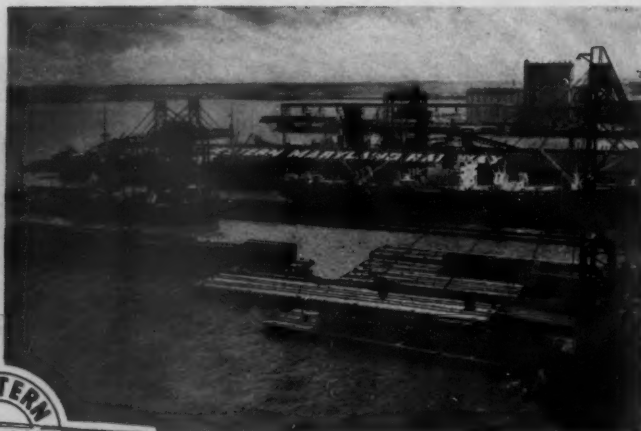
Our expanded teletype service adds to the efficiency of the Bureau and its trained personnel when expediting the movement of freight.

Years of experience have enabled the Bureau constantly to broaden and improve the scope of its operations. The first Bureau to be established on any railroad, it is unexcelled in the tracing and expediting of freight shipments.

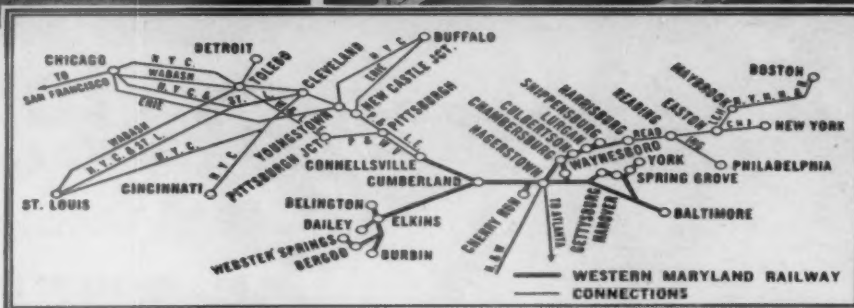
Our Service Bureau now has teletype circuits linking principal off-line traffic offices with all on-line points.



MAIN LINE OF MID-AMERICA



TO the principle that people will invariably cast their favor where their needs are most clearly understood and their interests are best protected . . . the Western Maryland Railway owes its successful progress.



WESTERN MARYLAND'S modern facilities at Port Covington in Baltimore are the ever-growing choice of world-wide shipping interests seeking high speed, low cost port handling . . . And Western Maryland's fleet of fast freight trains offers the quickest possible service between the Atlantic seaboard and the middle west.

To serve its patrons personally, Western Maryland Railway Company maintains branch traffic offices in most of the principal cities of the United States.

HEADQUARTERS, STANDARD OIL BUILDING, BALTIMORE 2, MARYLAND

WESTERN MARYLAND



Railway

REVOLUTIONARY FREIGHT CAR

TWIN-
CUSHION
EQUIPPED

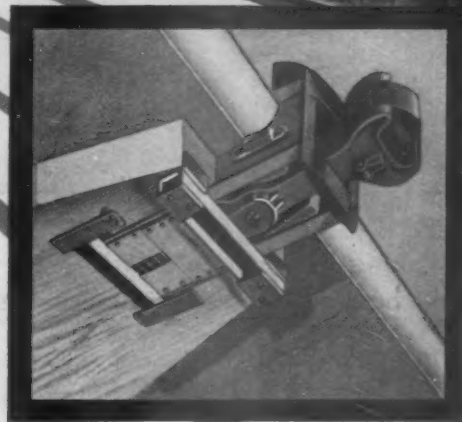


Here is a car that is completely new, completely modern in every respect. There is no center sill. The shell provides rigidity.

Impacts are absorbed by a moving "draft-sill" and cushioned by the most modern of all cushioning devices — Waughmat Twin-Cushions. Cushioned with premium Waughmat Twin-Cushions these cars are designed to provide premium lading protection.

For the newest car on your line or for the modernization of existing equipment, Waughmat Twin-Cushions are the lowest BIG improvement you can make on any car. Your inquiry is invited.

WAUGH EQUIPMENT COMPANY
New York • Chicago • St. Louis • San Francisco
Canadian Waugh Equipment Company
Montreal



Showing the "Unisorb" Floating Draft-Sill used in conjunction with Waughmat Twin-Cushions, Type WM-4-S, to provide extraordinary absorption and cushioning of longitudinal impacts and premium lading protection.

WAUGHMAT

Twin Cushions

TRADE MARK REGISTERED



The "skin" of America's fast, new jet planes is made of tough, lightweight aluminum.

To produce aluminum for aircraft and other strategic defense uses, coal is needed in vast quantities. In fact, in many cases, more than a ton of coal is used to make a ton of aluminum!

To meet the demands of aluminum manufacturers and other big customers such as steel, railroads, and public utilities, the coal industry is called upon to supply coal of particular kinds and grades. And, ever on the alert to give their customers an increasingly *better* product, America's progressive coal operators have built giant new preparation plants. Coal, processed in these plants and burned under the newest industrial boilers, produces *four times* as much power per ton as 30 years ago.

As a result of huge investments in preparation plants, research, mechanization and new mine properties, the coal industry is better prepared today than ever before in history to supply America's "power punch."

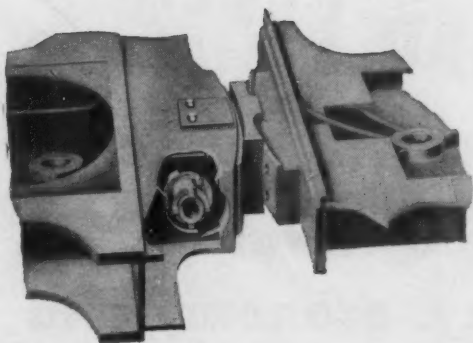
Using private capital in the time-tested American way, the nation's privately-managed coal companies have brought the coal industry to the highest level of productive capacity the world has ever known. Allowed to retain its trained man power and assured of an adequate supply of working tools, the industry will produce all the coal the nation may need—in peace . . . or in war.

BITUMINOUS COAL

BITUMINOUS COAL INSTITUTE

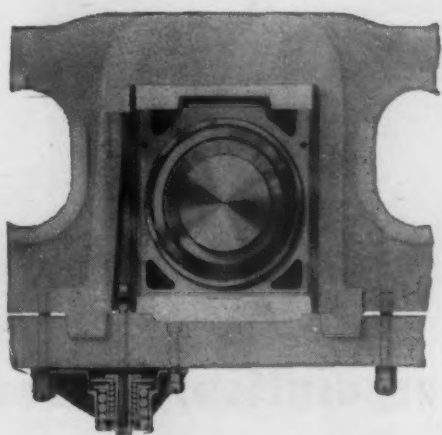
A DEPARTMENT OF NATIONAL COAL ASSOCIATION

WASHINGTON, D. C.



FRANKLIN E-2 RADIAL BUFFERS

The Franklin E-2 radial buffer reduces maintenance by dampening and absorbing horizontal shake and vertical vibration. This results in less wear on chafing plates; drawbars and pins; fewer pipe failures; less displaced brickwork; and fewer loose cabs. It requires minimum attention and will make any locomotive, at any speed, a better riding engine. Crews appreciate the greater comfort it brings.



FRANKLIN COMPENSATORS AND SNUBBERS

Equally important with roller-bearing or surface-bearing locomotives, the Franklin Compensator and Snubber keeps the driving box, or housing, snug in the pedestal jaw, regardless of expansion or wear. It will absorb unusual thrusts and shocks. Driving box pound is eliminated. Wear and the possibility of failure of crank pins and rod bearings are minimized. Tire mileage is extended by reduction of quarter slip.

Two SHOCK ABSORBERS

***that reduce
locomotive maintenance
costs!***

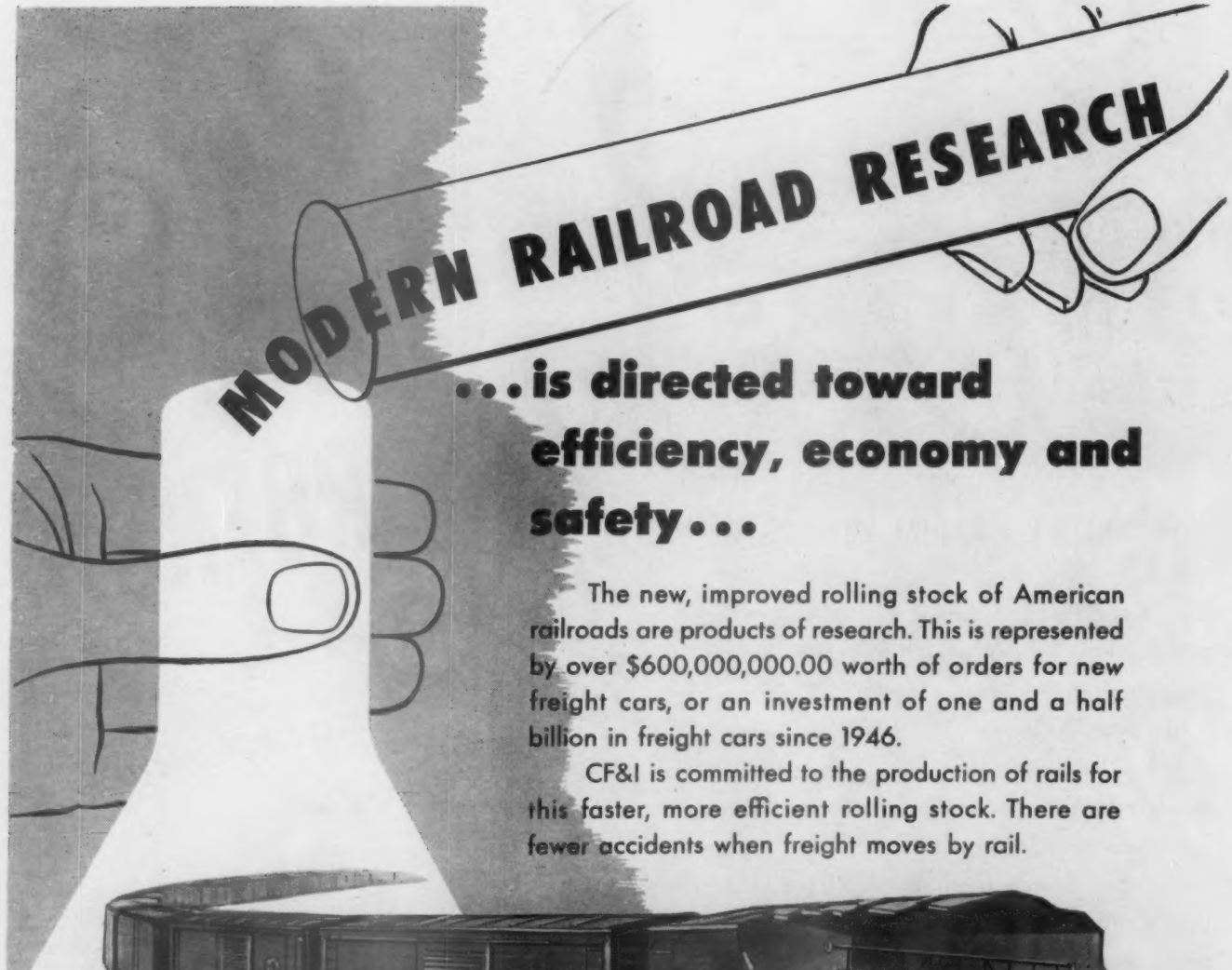


FRANKLIN RAILWAY SUPPLY COMPANY

A CORPORATION

NEW YORK • CHICAGO • MONTREAL

**STEAM DISTRIBUTION SYSTEM • BOOSTER • RADIAL BUFFER • COMPENSATOR AND SNUBBER • POWER REVERSE GEARS
FIRE DOORS • DRIVING BOX LUBRICATORS • OVERFIRE JETS • JOURNAL BOXES • FLEXIBLE JOINTS • CAR CONNECTION**

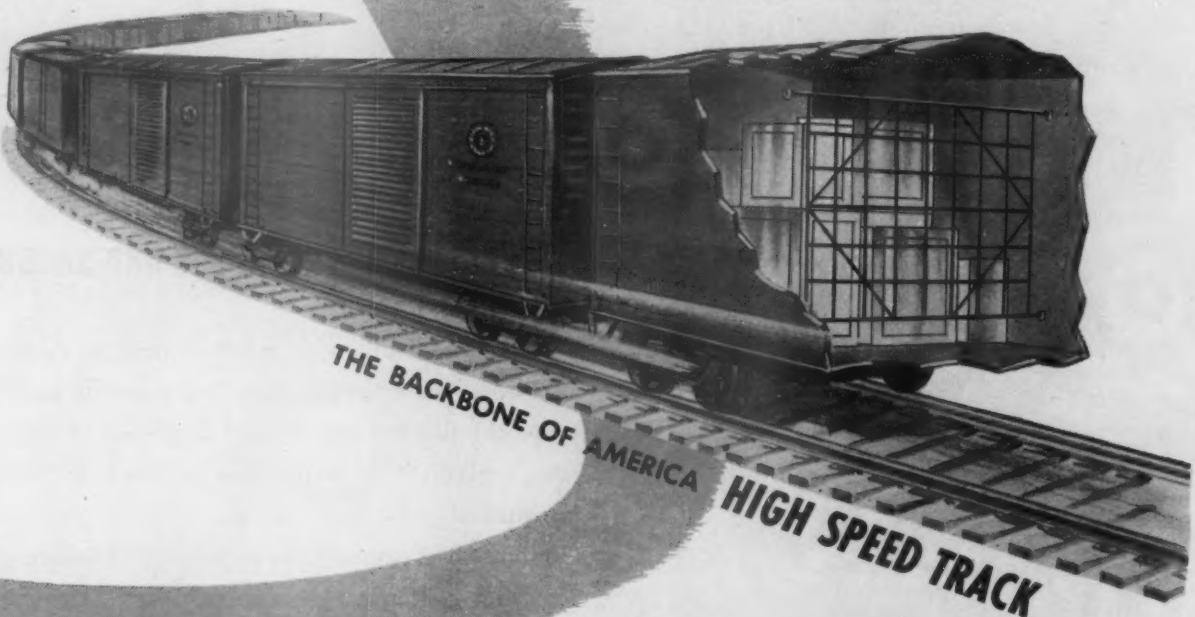


MODERN RAILROAD RESEARCH

**...is directed toward
efficiency, economy and
safety...**

The new, improved rolling stock of American railroads are products of research. This is represented by over \$600,000,000.00 worth of orders for new freight cars, or an investment of one and a half billion in freight cars since 1946.

CF&I is committed to the production of rails for this faster, more efficient rolling stock. There are fewer accidents when freight moves by rail.



The Colorado Fuel and Iron Corporation, Denver

A
PRODUCT
OF



CF&I RAILS AND FASTENINGS

Carrying the ~~ball~~ coal

... for the world's greatest
production team!



Central's Part on "The Big 11." The 11 states New York Central serves produce about 75% of America's coal and 60% of its manufactures. That makes Central's biggest carrying job the all-weather movement of coal from mine to mill... and to millions of coal-heated homes.



106 Miles of New Coal Cars. To do its vast job, New York Central has greatly expanded its coal-carrying fleet. Since 1948, 106 miles of new coal cars have been put in service, ordered or planned. And, whether you ship or use coal, that means cars enough to meet your needs.



Direct Routes and Connections. Central's tracks and connections link the mine fields of Illinois, Indiana, Kentucky, Ohio, Maryland, Pennsylvania, Tennessee, Virginia and West Virginia with the newest, most strategic Great Lakes coal docks... and with the largest coal-using centers.



Coal Experience at Your Call. For help in speeding coal shipments... developing coal properties... or locating sources of any special types of coal you need... call on New York Central's Coal Traffic Department. Its long experience and expert knowledge are both yours for the asking.



New York Central

The Smooth Water Level Route



... Mark of PROGRESS in Railroading



Clear track ahead—for years!

HERE'S a glimpse of a diesel from the cab of another diesel—a sight you will see more and more along the Erie's 2,200 miles of railroad. There's a big story of foresight in the growth of Erie's diesel fleet!

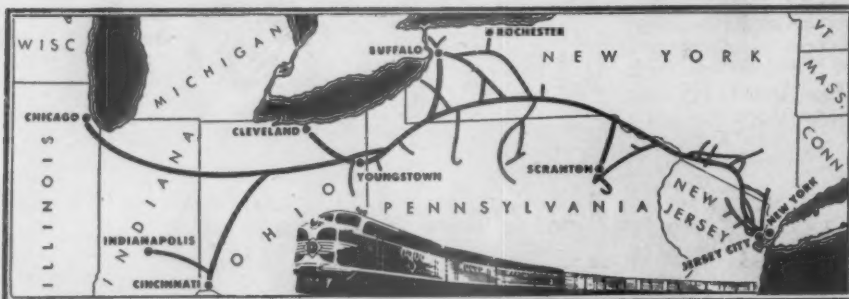
It was away back in 1926 that the Erie bought its first two diesels—switchers for its New York freight

yards. From that early start, Erie now owns or has on order 399 diesel units of all types. They range from yard switchers up to the big, brawny 6000 h. p. road diesels that are now hauling over 70% of its freight.

That total gives the Erie one of the highest percentages of diesel ownership of any eastern railroad—and

there are still more diesels to come in a few months.

Erie's constantly growing diesel fleet provides faster schedules and better on-time performance, plus other advantages that contribute to Erie's progressive railroading. Look to the Erie for leadership in the safe, dependable transportation of both passengers and freight.



Erie Railroad

Serving the Heart of Industrial America

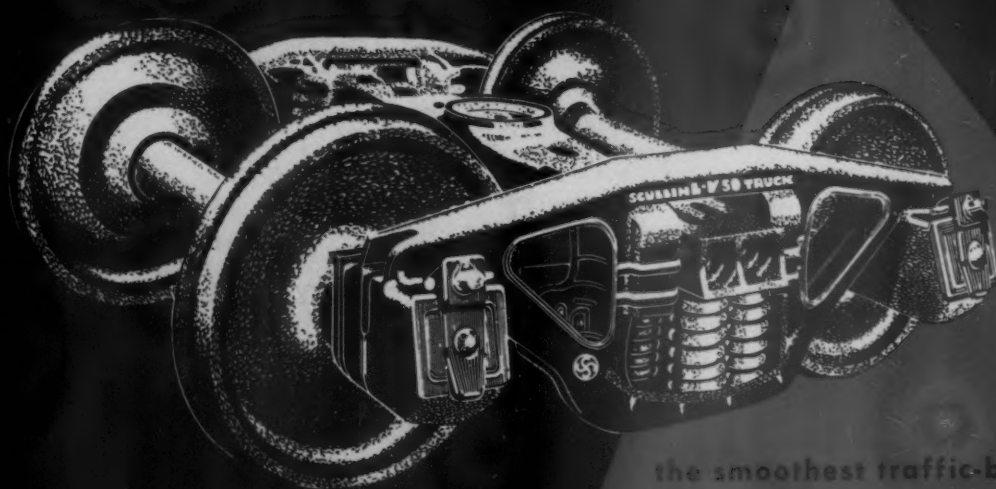


For
extra-protection

of your "extra-fare" freight... SCULLIN



TRUCKS

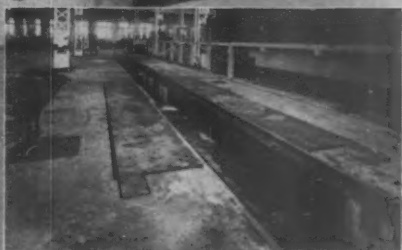


SCULLIN STEEL CO.
SAINT LOUIS 10, MISSOURI

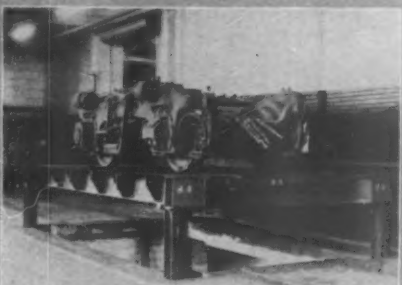
the smoothest traffic-builder
between
LCL and your rails

NEW YORK • CHICAGO • CLEVELAND • BALTIMORE • RICHMOND, VA. • MEXICO CITY, D. F.

Spacer Posts-on WHITING DROP TABLES SAVE TIME-SPACE-INVESTMENT IN EQUIPMENT



Cover for release track opening shown at floor level. Part of Whiting Drop Table installation in Lehigh Valley shop at Sayre, Pa.



Rails are mounted on release track cover in B & O shop, M & K Junction, W. Va. Here trucks are lifted and loaded onto a flatcar for transportation to shop located elsewhere.

Photo courtesy Erie Railroad.

An automatic cover for release track openings is made possible with the spacer posts designed for the improved Whiting Drop Table. Time is saved—a possible hazard is eliminated—and there is a gain in floor space.

When dropped trucks are raised to the release track by the Whiting Drop Table, spacer posts are engaged which automatically raise the release track cover. Held like a canopy (see above)—the cover is out of the way, and no cranes, hoists, or special equipment are required. As the table is lowered, after truck is released, the cover is returned to normal position and the opening is closed. Area becomes safe and unobstructed for other jobs.

When rails are mounted on the cover, the top (see photo lower left) may lift the truck for loading on flatcar—for transportation to a shop located elsewhere. No cranes, or hoists, or other special equipment required.

Improved Whiting Drop Tables are available to meet your exact requirements. Write for more information.

WHITING CORPORATION

15603 Lathrop Avenue, Harvey, Illinois

RAILROAD MAINTENANCE EQUIPMENT

Offices in Chicago, Cincinnati, Detroit, Houston, Los Angeles, New York, Philadelphia, Pittsburgh, and St. Louis. Representatives in other principal cities. Canadian Subsidiary: Whiting Corporation (Canada) Ltd., Toronto, Ontario.
Export Department: 30 Church Street, New York 7, N. Y.

John doesn't "push" here any more...

Remember the famous song that went:

*Where do you work-a, John?
On the Delaware-Lackawanna.
What do you do-a, John?
Oh I push, I push, I push.*



Today, if you asked John what he does, he'd tell you that he doesn't do much pushing any more. Machines now handle the transfer of packaged freight between lighter or boxcar and covered docks on the Lackawanna — faster, much more efficiently and with far greater safety for shipments.

For example, average tons of packaged freight handled per man-hour at the Hoboken Terminal has been in-

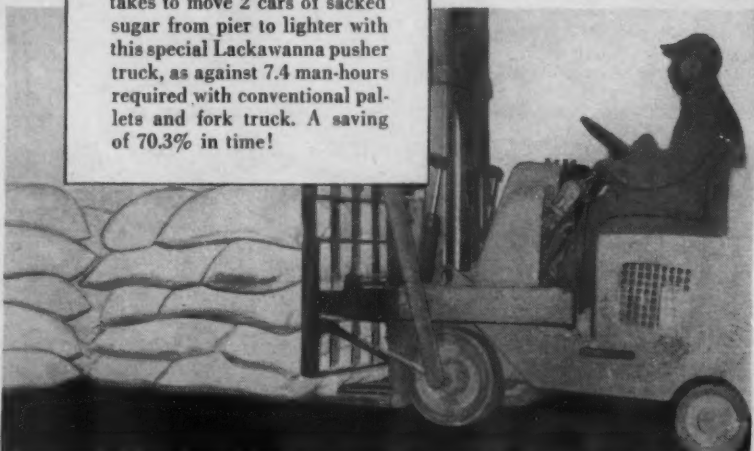
creased 44% in three years — thanks to the ingenious "take-it-or-leave-it" pallet and fork-truck pusher device developed by the Lackawanna.

Whether it's packaged freight, perishables or heavy machinery, modern Lackawanna efficiency adds up to preferred handling for your shipments. That's why so many of the world's great shippers specify Lackawanna — to or through New York.



SHIPPED WITHOUT PALLETS, packaged freight still gets fast, mechanized handling on Lackawanna "take-it-or-leave-it" pallets. A fleet of Towmotors with 4 broad, flat prongs and special "pusher" device speeds the loading and stacking of unpalletized shipments.

JUST 2 MAN-HOURS is all it takes to move 2 cars of sacked sugar from pier to lighter with this special Lackawanna pusher truck, as against 7.4 man-hours required with conventional pallets and fork truck. A saving of 70.3% in time!

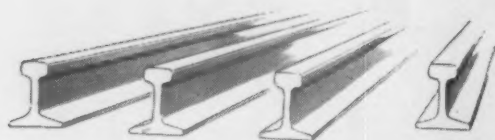
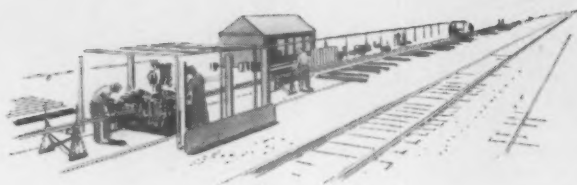


Lackawanna Railroad



SHIPPERS WHO ARE IN THE KNOW, CHOOSE THE ROUTE OF PHOEBE SNOW

NOW is the time to plan your 1951 Rail Welding Program



When you are planning continuous rail—RIBBONRAIL—for open track, tunnels, bridges, or stations, call in OXWELD.

—Talk the whole plan over with us. We will arrange the scheduling of an OXWELD pressure unit and show you the most economical methods based on our experience of over 11 years in this operation.

—We'll help you pick a welding location for the OXWELD six station pressure welding set-up.

—We'll plan your transportation method for long lengths with equipment you now have . . . flat cars, skid rails, or push cars and buggies.

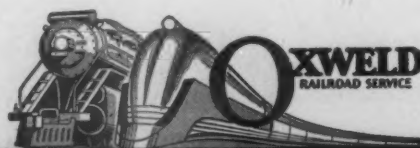
—Just specify in your next rail order that rail ends must be undrilled, unbeveled, and unhardened.

—We repeat, now is the time to plan your 1951 rail welding program. Include RIBBONRAIL in your 1951 budget.

The terms "Oxweld," and "Ribbonrail" are trade-marks of Union Carbide and Carbon Corporation or its Units.

THE OXWELD RAILROAD SERVICE COMPANY Unit of Union Carbide and Carbon Corporation

Carbide and Carbon Building Chicago and New York
In Canada:
Canadian Railroad Service Company, Limited, Toronto



SINCE 1912—THE COMPLETE OXY-ACETYLENE SERVICE FOR AMERICAN RAILROADS



WHAT HE
NEEDS IS

*"Shock-Force
Control"*

40%
EXTRA LADING
PROTECTION

This man was your customer . . . but not now. Goods he shipped out on your railroad, merchandise he received from you were repeatedly damaged in transit. Now all his traffic goes over the highway.

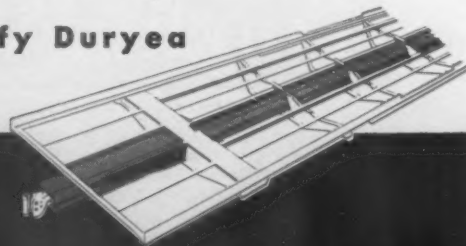
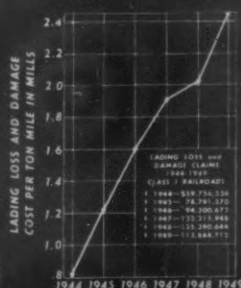
The old argument that cars in interchange are another road's headache doesn't hold good any more. Competition is too quick to pick up the pieces.

Each railroad, today, for its own protection, needs to safeguard lading where

ever it goes. When each does his share, all benefit . . . when each shock-proofs his cars . . . provides that 40% extra lading protection on the cars he owns, lading-damage reduction is certain . . . reduction to the absolute minimum. On all new freight cars, provide "shock-force control," equip with Duryea Cushion Underframe, safeguard cars and lading against most of the excessive shocks of starting, stopping, train surge and coupling.

**The way today is to specify Duryea
on all new cars.**

TREND OF LADING
LOSS AND DAMAGE
COSTS IN RELATION
TO TON MILES OF
FREIGHT CARRIED
BY CLASS I RAILROADS



duryea cushion underframe

HULSON CO.

332 SOUTH MICHIGAN AVENUE
CHICAGO 4, ILLINOIS



In this weathering room hot, dry, cold and wet conditions are automatically alternated to accelerate aging.

where **INSULATION is Food for Thought**

Looks like an oven full of cakes, but it isn't. It's a weathering chamber testing glass fiber insulation. Here time passes thirty times faster than normal—in order that time shall stand still in refrigerated transport.

This "torture room" is one of many test devices used at the Fiberglas Research Laboratories. Here "candidate" insulation products of glass fiber are proved. Here the glass fiber of Owens-Corning Fiberglas Corporation is certified as fit for fabrication by many manufacturers . . . fit to meet and exceed standards . . . fit to help America live better.

No matter what insulation product you buy that contains a Fiberglas* material, the glass fiber used in it and its fabricated form have passed the test of science and experience here at one of America's great industrial laboratories. For details and samples, phone or write Owens-Corning Fiberglas Corporation, Dept. 21-K1, Toledo 1, Ohio.

OWENS-CORNING
FIBERGLAS

*Fiberglas is the trade-mark (Reg. U. S. Pat. Off.) for a variety of products made of or with glass fibers by Owens-Corning Fiberglas Corporation.

FIBERGLAS IS IN YOUR LIFE...FOR GOOD!

L.C.L.

FREIGHT MERCHANDISE SERVICE

fast and dependable

via KATY KOMET
and other Katy Fast Freights

to and from

**MISSOURI, KANSAS,
OKLAHOMA and TEXAS**

*speeds shipments
whatever their size*



COORDINATED RAIL-TRUCK SERVICE

Just phone your nearest Katy representative and tell him *what* you have to ship and *where* it's going.


From then on, Katy's safe, modern, ON-TIME L. C. L. service takes over until shipment is delivered to your customers' door.

**Free pick-up and delivery
from and to shippers' door**

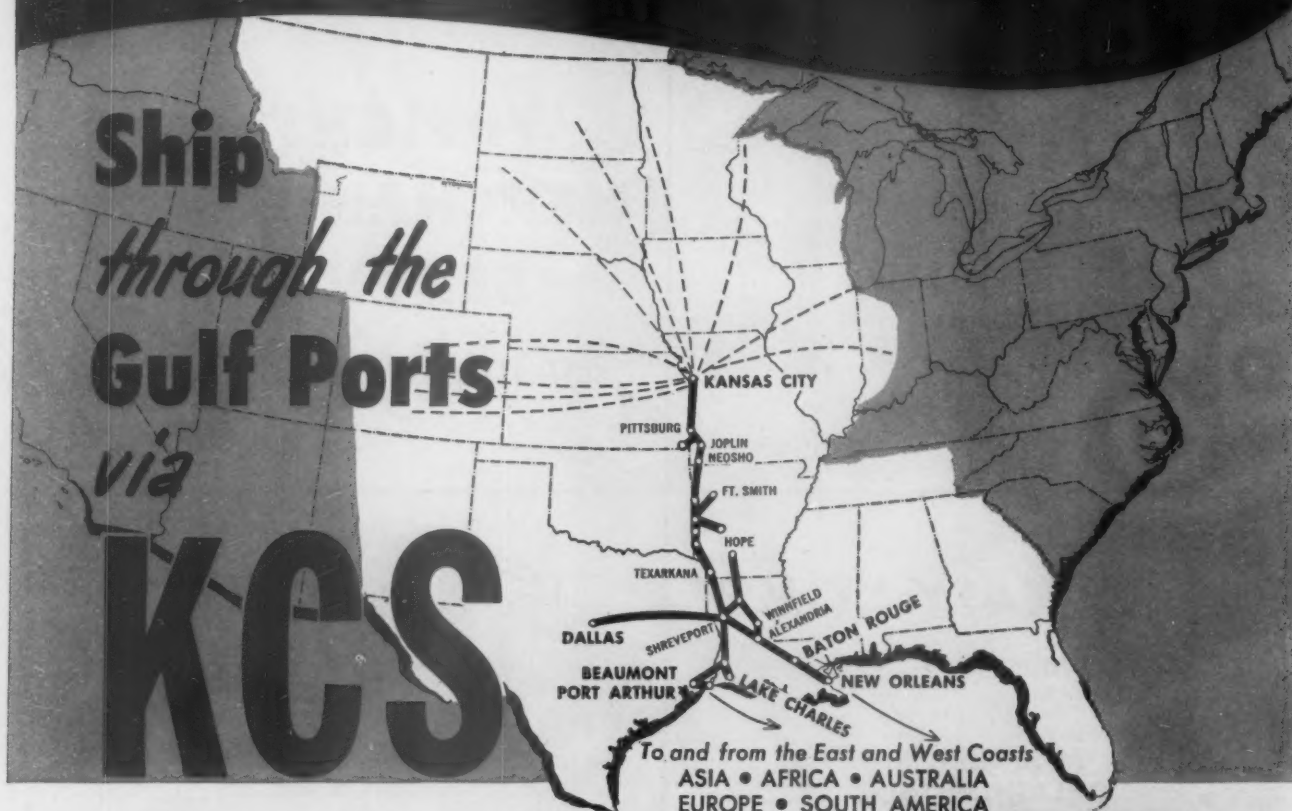
All cars are worked at our freight houses day of arrival.



Contact your
Katy representative
for details

NATURAL ROUTE  SOUTHWEST

FOR FASTER SHIPMENTS, LOWER COSTS



Dieselized Freight

Rail rates are favorable on overseas shipments between Mid-America and the Gulf Ports, where the most modern and efficient facilities cut handling charges to a minimum. And your shipments to and from New Orleans, Port Arthur, Baton Rouge, Beaumont, Lake Charles and the South-Southwest go the quickest, most direct way when you route them KCS.

J. W. SCOTT
Vice President—Traffic
Kansas City, Mo.

For FREIGHT With a DATE—

It's KCS Lines!

KCS 77 catches the fast connections from the North, West and East, and rolls south from Kansas City at 8:40 nightly with the "hurry-up" freight.



NEW ORLEANS

Principal American port for overseas shipments by the Army during the war . . . by ECA in postwar years . . . New Orleans has unexcelled facilities for world trade—8 miles of the best equipped docks, America's No. 2 Foreign Trade zone, and the services of famed International House and the International Trade Mart.

Other great Gulf Ports—Port Arthur, Baton Rouge, Beaumont and Lake Charles—are featured in this series.

STANDARD ENGINEER'S REPORT

LUBRICANT	DATA <i>RPM DeLo Oil R.R.</i>
UNIT	<i>Locomotive Diesel G.M. 567</i>
SERVICE	<i>Freight haul over mountains</i>
PERIOD	<i>4 years</i>
LOCATION	<i>Auburn, Wash. Livingston, Mont.</i>
FIRM	<i>Northern Pacific Railway</i>

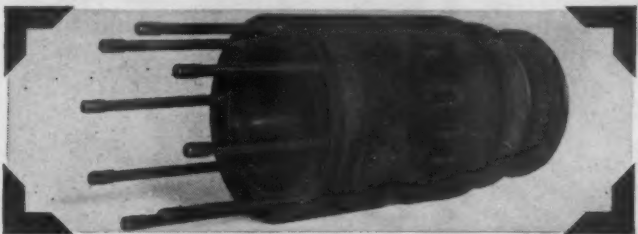
Engine parts still in use after 4 years freight service!



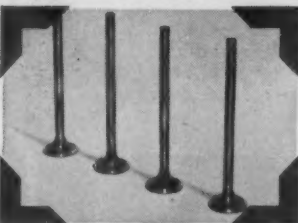
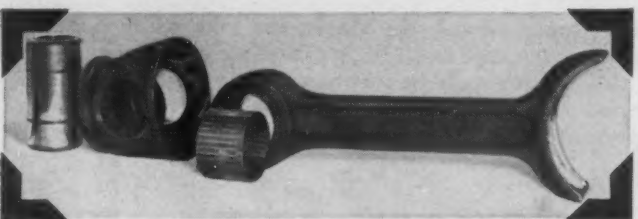
RPM DELO OIL R.R. IN THIS LOCOMOTIVE'S ENGINES during four years of mountain freight service, held wear down so low that after each progressive-maintenance inspection the cylinder-assembly parts were put back to work.



IN SERVICE 490,013 MILES, this piston indicates the excellent condition of all parts as they came from the engines. Note the absence of lacquer deposits and that all rings are free. A special detergent in RPM DELO R.R. keeps contaminants harmlessly dispersed in the oil.



481,384 MILES OF SERVICE from this liner during 4 years caused only 0.005" wear, 0.001" taper.



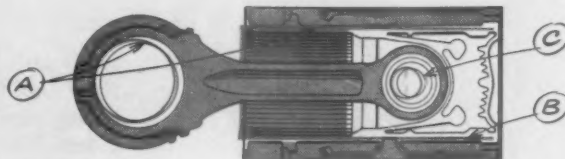
NO VALVE TROUBLE of any kind was encountered. Mileage on these valves, 200,000 since servicing cylinder head.

CON ROD BEARINGS, CARRIER AND WRISTPIN BUSHINGS at the end of four years were in "perfect" condition as this picture shows. Mileage on these parts is 481,384.



TRADEMARK "RPM DELO" REG. U.S. PAT. OFF.

How RPM DELO Oil R. R. prevents wear, corrosion, oxidation



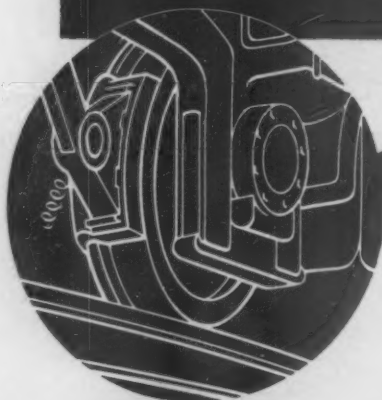
- A. Special additive provides metal-adhesion qualities...keeps oil on parts whether hot or cold, running or idle.
- B. Anti-oxidant resists deterioration of oil and formation of lacquer...prevents ring-sticking. Detergent keeps parts clean...helps prevent scuffing of cylinder walls and valve blows.
- C. Special compounds stop corrosion of any bushing or bearing metals and foaming in crankcase.

FOR MORE INFORMATION about this or other petroleum products of any kind, or the name of your nearest distributor handling them, write or call any of the companies listed below.

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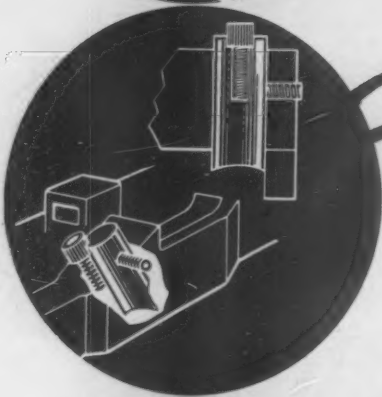
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To take down a high flange, you simply remove the regular brake shoe and replace it with an FCC-21 Combination Cutter Shoe. This installation does not require disassembly of the brake rigging, and is made in a matter of minutes.



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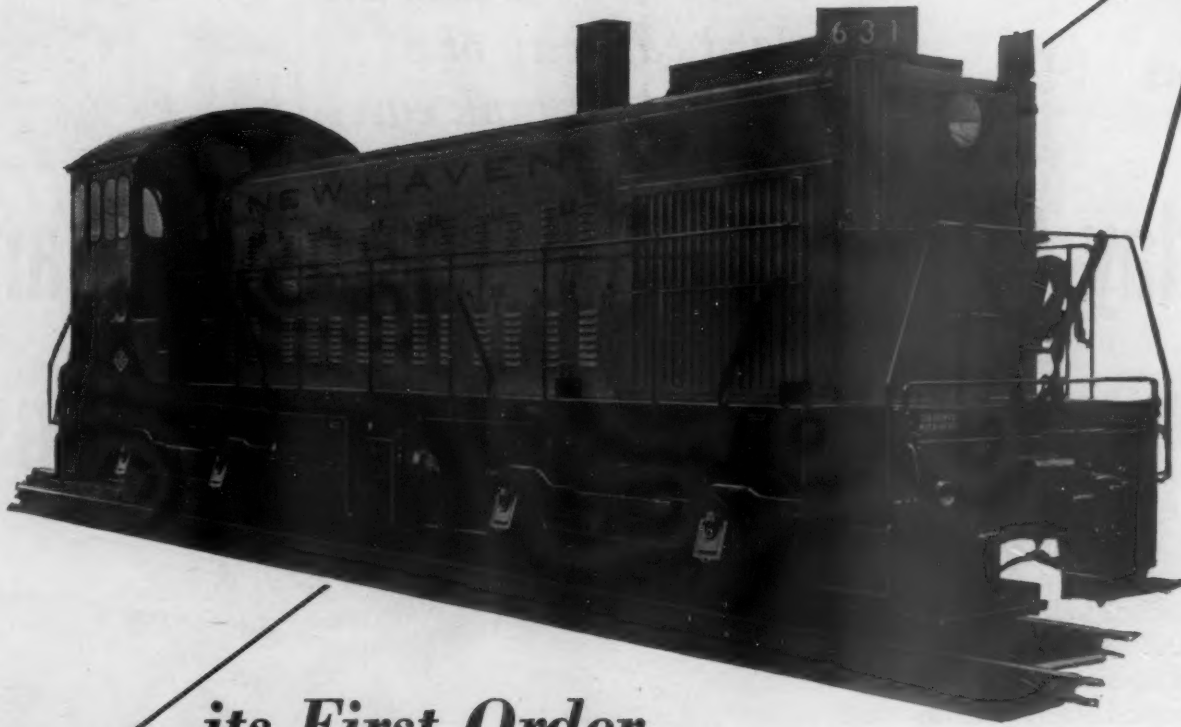
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with chemical progress*

THE PROSPECT FOR MORE FREIGHT CARS

Since January 1 of this year orders have been placed for more than \$572,000,000 worth of freight cars for domestic use in the United States. The orders total 113,345 units—more cars within the ten months of this year than have been ordered in the twelve months of any recent year but one—1947. Orders for 77,170 were placed with the contract builders and 36,175 with the shops of railroads and private car lines. About 54,000 are box cars and 47,000 open-top cars. Orders for all but 38,000 have been placed since the middle of the year.

Car Shortage Acute

The cause of this sudden resumption of car buying after about a year and a half of doldrums will be readily understood after a glance at the graph of car loadings. For the first quarter, the 1950 loadings were considerably lower than those of 1949. During the second quarter they nearly, but not quite, equaled those of last year. During the third quarter they exceeded them by more than a million car loads. This sudden sharp increase in the demand for transportation was caused primarily by the outbreak of war in Korea.

Since the end of 1944, Class I railway freight-car ownership has declined over 42,000 and the number of

cars in shops and awaiting repairs has increased about 58,000, a reduction of over 100,000 in the available supply of cars. The rate of turnaround has also suffered from the 40-hour week, observed by shippers and railroads alike. Chairman J. Monroe Johnson of the Interstate Commerce Commission and President William T. Faricy of the Association of American Railroads, in a joint statement issued on August 30, estimated the effect of the reduction in working days to be equal to the loss of use of 175,000 cars. The increase in loadings has, consequently, resulted in acute car shortages.

In these circumstances it was inevitable that the freight-car situation would become the subject of discussion at Washington. A bill introduced in the House of Representatives proposes the establishment of a government corporation to procure and lease cars to the railroads. Before the end of July, the railroads, through the A.A.R., had pledged themselves to a net increase of 122,000 cars.

Shippers' Attitude Constructive

The situation was also frankly and constructively discussed by spokesmen of both shippers and railways at the annual meeting of the National Association of Ship-

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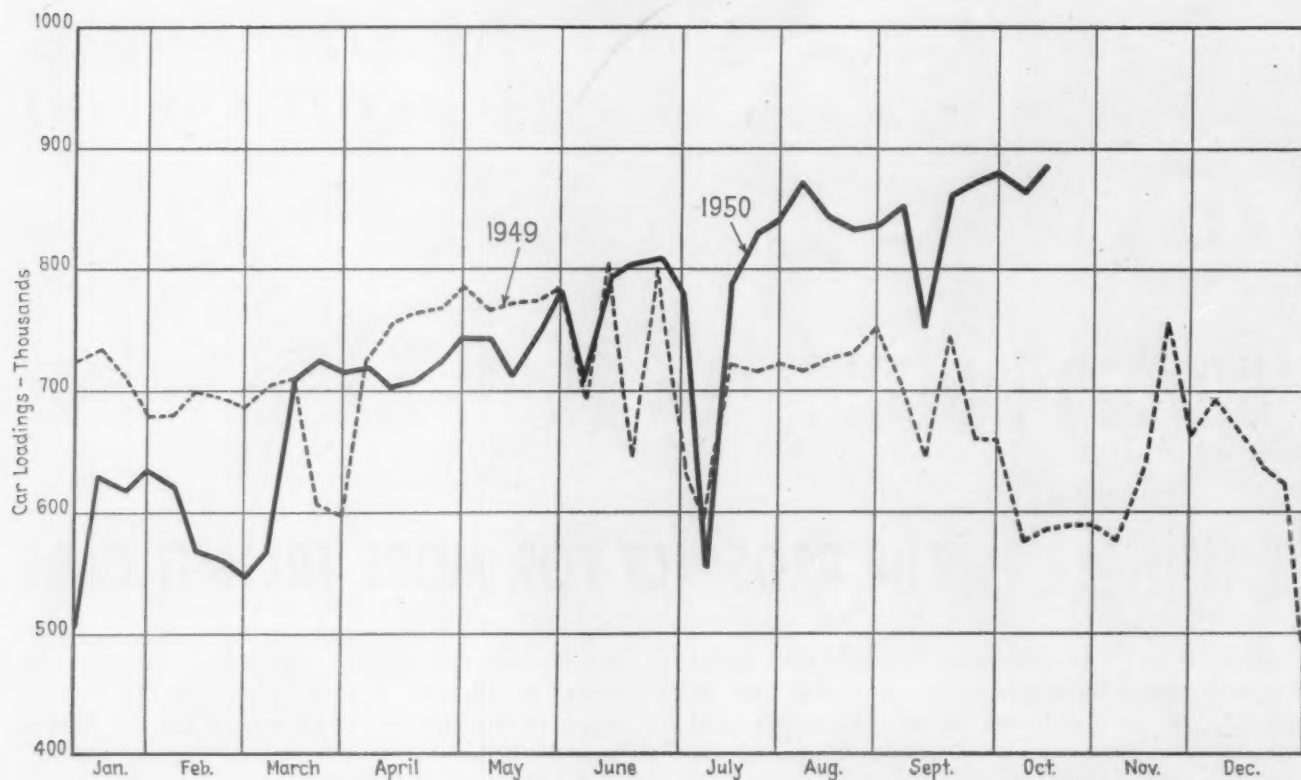
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Weekly carloadings of revenue freight 1949 and 1950

pers Advisory Boards at Denver on October 4 and 5, as reported in the *Railway Age* of October 14.

The association adopted two important resolutions. One urged the railways to increase their program for purchasing and building new cars "to provide for the building of at least 10,000 cars per month over and above retirements until present ownership has been increased by 150,000 cars, and that necessary materials be made available fully to carry out such an augmented program." The other resolution urged all shippers boards to reactivate their car efficiency committees immediately.

Frank H. Cross, division traffic manager of General Mills, said that the five-day week both in industries and on the railroads resulted in almost unanimous reports from all shippers boards of car delays; and that most of the chairmen making reports are of the opinion that carriers and industry must abandon the 40-hour week. He also urged voluntary heavier loading by industry to increase car supply and prevent an Interstate Commerce Commission order requiring it.

President Faricy said that "given opportunity to secure manpower and materials, especially steel, necessary to reach and sustain a production of 10,000 cars per month," a net increase of 122,000 cars will be reached in three years, and that this will require the construction of about 267,000 new units.

The objective of 10,000 new cars per month has the endorsement, also, of Interstate Commerce Commissioner James K. Knudson who, in his capacity as defense transportation administrator and "claimant" of the trans-

portation agencies before the newly established National Production Authority, has presented a program calling for the building of 227,400 new cars by June 30, 1952. As a matter of fact, this program calls for a production of more than 10,000 cars per month and is to increase Class I railroad car ownership by 75,600 cars and to provide 31,800 cars for expansion and replacement of private-car-line fleets. The rate of retirements of this program is higher and does not go as far as the program proposed by Mr. Faricy in increasing the car ownership by the Class I railroads.

Are the Sights Elevated Enough?

How many additional cars are needed? The program proposed by President Faricy, based on the experience of the organization with the most intimate and the broadest knowledge of nationwide demand, is extremely conservative, considering that there has been lost the equivalent of well over 200,000 freight cars since the end of 1944—the year in which freight-car utilization reached its peak—by inventory reduction and the effect of the five-day week. This does not include the effect of the increase of 58,000 bad order cars since 1944, because these cars can and undoubtedly will be restored to serviceable condition within a matter of months. Indeed, the reduction of bad orders actually effected during the seven months since February 1 amounts to over 32,000 cars.

The ability to attain the objective proposed by Mr.

Faricy depends largely upon the rate at which old cars are retired. The average monthly rate of retirements during the first eight months of 1950 was 6,890 cars. If the proposed production rate of 10,000 new cars a month were reached promptly, the goal of 123,000 additional cars would be attained in considerably less than three years, with retirements continuing at well over 5,000 cars per month. This is in keeping with the tendency of retirements to decline under the pressure of heavy demands for cars.

How Many Cars Can Be Built?

In appraising the prospects of attaining the goal of 10,000 or more new cars per month, the capacity of available car building facilities, the prospects of securing an adequate supply of steel, and the prospects of being able to recruit the requisite manpower must be considered.

Several variable conditions affect the number of cars which can be turned out of a car-building plant in a month. Whether orders are large, permitting long runs on a single design, or small, making short runs necessary, is one important factor. Output also depends, obviously, upon whether a plant is operating on a single shift or on multiple shifts. With a heavy preponderance of long runs and no material shortages, the contract car builders might reach an output of well over 10,000 cars a month on a normal one-shift basis. This would require, however, an ideal distribution of orders, so that all plants could remain geared to capacity production. No such ideal condition is likely to exist unless the backlog of orders is even higher than the present approximately 100,000 cars. The probability is remote that either steel or manpower will be available in the immediate future to sustain multiple-shift operation.

The supply of steel for car building depends upon how many top priorities will be in competition before the National Production Authority for a limited overall supply. During the early postwar years the needs of the car builders and the railroads for new cars were met reluctantly, and then on a monthly quota basis which provided that allocated steel capacity unused in any one month was lost to the program.

Allowing for conditions somewhat less than ideal, an output of 10,000 new cars a month for the contract builders alone would seem to be a goal possible of attainment, contingent upon steel enough to support such a program.

Of uncertain value is the capacity of the shops of the railroads and private car lines. During 1948, when a 10,000-car goal was attained for two successive months, 83,100 of the year's output of 112,000 freight cars were built by contract car builders and 29,000 by company shops. This is equivalent to an average monthly output of 6,900 cars for the contract shops and 2,400 for the company shops. Temporarily, at least, the primary goal of company shops will be repairing and rebuilding existing cars rather than building new cars.

What international emergency the nation may face

in the future and when it will arise only the future can disclose. In the meantime, wisdom dictates pushing the restoration of an adequate supply of freight cars to meet whatever situation may arise before acute needs for materials, for manpower—and even for car-building plant capacity for purposes other than car building—are multiplied. And let it be emphasized that no car-building program such as is now contemplated can be carried out on a flurry of orders. There must be a high and a sustained backlog of orders if capacity output is to be approached.

HOW MAKE BEST USE OF MANPOWER?

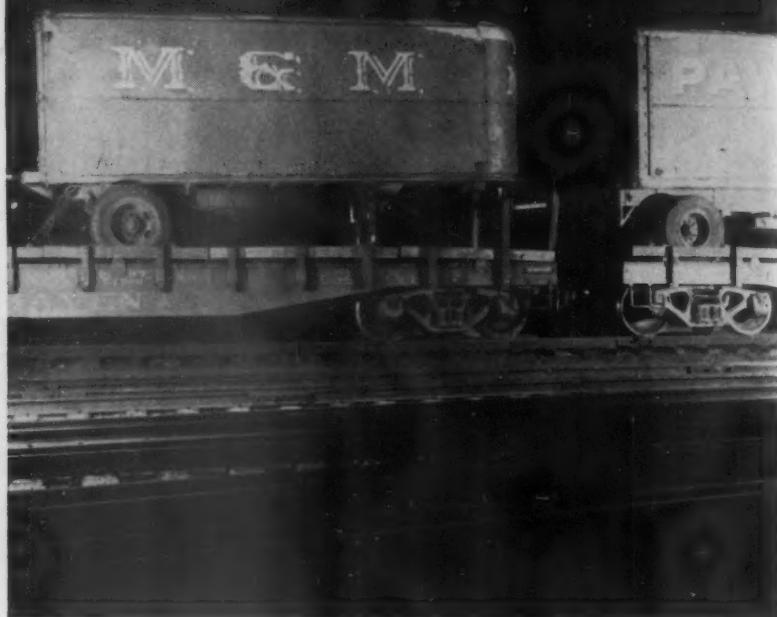
It would require a lot of optimism to believe that manpower shortages are not in the offing for the railroads, as well as for other industry. Since freight and passengers move on paper as well as over the rails, accounting departments and sections of other departments where paperwork is performed may be just as hard hit proportionately as the operating and maintenance departments. In the circumstances, those railroads that have mechanized their paperwork as far as possible are in a favored position. Office methods and procedures groups, on the railroads where such organizations exist, have been helpful in continuing to discover improved methods of doing paperwork, so that a greater production can be obtained with no increase in personnel. Such systematic study of the problem usually finds ways of eliminating overtime, which not only reduces expense but helps in cutting down labor turnover.

In an illustrated article in the May 14, 1949, issue of *Railway Age*, D. J. Spowart, superintendent of car service of the Western Pacific, told how, during World War II, his road was faced with a shortage of clerical help, plus a rapid turnover. Installation of mechanical equipment helped reduce the turnover and at the same time made it unnecessary to add to the staff another nine clerks who had seemed to be required. While this particular installation was not planned by a methods and procedures group, it is the sort of work such an organization can—and does—perform, with the least possible amount of disturbance to the normal routine of work in the department being surveyed.

Mechanization is one way to obtain better utilization of available clerical forces, but procedural changes—involving improved forms, or elimination of work duplication which does not necessarily involve machinery—can be equally effective. If priorities should be established on mechanical equipment for doing office jobs, an office methods and procedures staff should have added value—because, under such circumstances, better ways of doing things are the only source of economies either in personnel or expense.

Moving Highway Trucks On Trains

*An old idea which continues to interest
shippers and railroad men*



Combining the flexibility of truck operations in terminal districts with the economy and speed of overland transportation by railroad is an idea which has fascinated shippers and railroad men for a quarter of a century. Ever since the truck was an infant, plans and methods have been advanced, discussed, and tried. One of the most recent, the development of a specially designed highway semi-trailer for use in coordinated truck-rail service, was described in the September 30 issue of *Railway Age*.

Practical developments toward combining truck and railroad services have grown along two principal lines: (1) The use of containers (or "truck bodies") which can be readily shifted from railroad car to truck, or the reverse, at terminal yards; (2) arrangements for handling regular highway semi-trailers on railroad cars. Both kinds of service are available today.

The use of specialized containers with coordinate machinery for shifting from railroad car to truck has found rather limited application in actual service thus far, because a comparatively heavy investment in equipment is involved. It is necessary to have a suitable railroad car to handle the containers, as well as special truck trailers for use at each end of the trip. This arrangement does, however, make possible a larger cubic load per flat car, and greater payload per pound of dead-weight. Such containers are in use today for the shipment of milk into New York City.

Highway Semi-trailers

As recently as 1949 the Illinois Central conducted extensive experiments using this type of container for the handling of bulk l.c.l. shipments over its lines. Although extensive tests were run between Chicago and St. Louis, Memphis, Birmingham, Columbus, Ga., and New Orleans they were unable to generate enough l.c.l. from one or two consignors to one or two consignees to justify this service on a regular basis.

The movement of highway semi-trailers has been

extensively developed within the past two decades. Experience with this type of service dates from May 1, 1926, when the Chicago North Shore & Milwaukee improved its l.c.l. service by handling "semis" on flat cars for its own convenience. Two years later this was further improved by inauguration of a service whereby one consignor in Chicago or Milwaukee, having l.c.l. shipments of 6,000 lb. or more for one or two consignees in the opposite city, was furnished with a highway semi-trailer which he could load at his own door. This semi-trailer, owned and operated by the North Shore, was then transported between the two cities on a railroad flat car. On April 1, 1932, the North Shore invited over-the-road motor carriers to ship loaded or empty semi-trailers by train between Chicago, Racine and Milwaukee. To insure its success, the service was offered at a rate a little lower than what it cost a trucker to move the same trailer over the highway and there was a choice of day, evening and night schedules. As a result, the use of this service gradually increased, even on such a short run, until the North Shore was handling over 40 trailers a night.

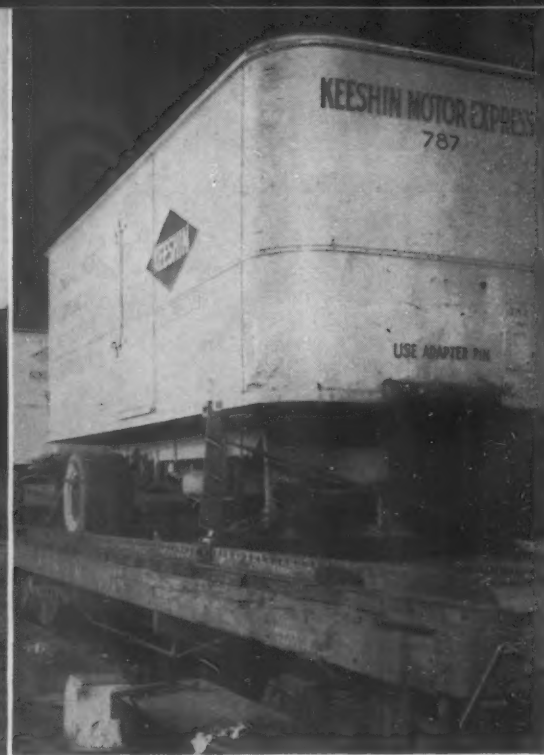
The Chicago & Alton (now Gulf, Mobile & Ohio) established a somewhat similar service between Chicago and St. Louis in October, 1932. However, this service did not prove economically successful and was terminated about a year later.

In 1936, the Chicago Great Western entered the field with a railway service for highway truck semi-trailers between Chicago and Kansas City, Council Bluffs, Des Moines, and St. Paul. With this service the road added to and improved the North Shore's patented method of locking the semi-trailers to the railroad flat car. The combination of these two systems is widely used today. The C. G. W. service—although it has had its ups and downs—is being actively promoted and developed today.

In the middle 1930's, the New York, New Haven & Hartford was wrestling with its entire New York terminal problem. One proposal resulting from this study which bore fruit was the general use of highway semi-



Above—The New Haven loads and unloads semi-trailers, using its own tractors and employees. The Chicago Great Western requires independent truck operators to place semi-trailers on flat cars, and to remove them, but railroad men secure



them to the cars. Right—The 30-ft. and longer highway semi-trailers which are in common use today take a flat car apiece. Here is a North Shore car about 1946

trailers on railroad cars. This ultimately produced a rail service between New York and Boston specifically designed for the handling of highway semi-trailers. This service was later expanded to include service between New York and Providence, and most recently between New York and Springfield, Mass. This service soon encountered opposition from other interests, but with fortitude and patience the traffic was built from a modest beginning to the point where it is now grossing well over a half million dollars a year.

In 1937, the same year the New Haven entered this field, the Chicago, Burlington & Quincy started to utilize rail transportation of highway semi-trailers between Chicago and Galesburg, Ill., to solve an unbalanced traffic problem of its subsidiary trucking operation, the Burlington Transportation Company. This service, which is still being successfully used, enabled the trucking subsidiary to solve a troublesome problem without purchase of additional highway tractor units.

During this period, the Denver & Rio Grande Western inaugurated a semi-trailer railroad service between Denver and Grand Junction, Colo. However, this service (which is running today) is limited to transportation of groceries, packing house products, and related items.

In 1938 the Chicago, Rock Island & Pacific inaugurated a limited service for use by highway semi-trailers between Chicago, Moline, Davenport and Rock Island. This service was operated for four years and discontinued when the principal user changed his shipping methods.

North Shore's Pioneer Service

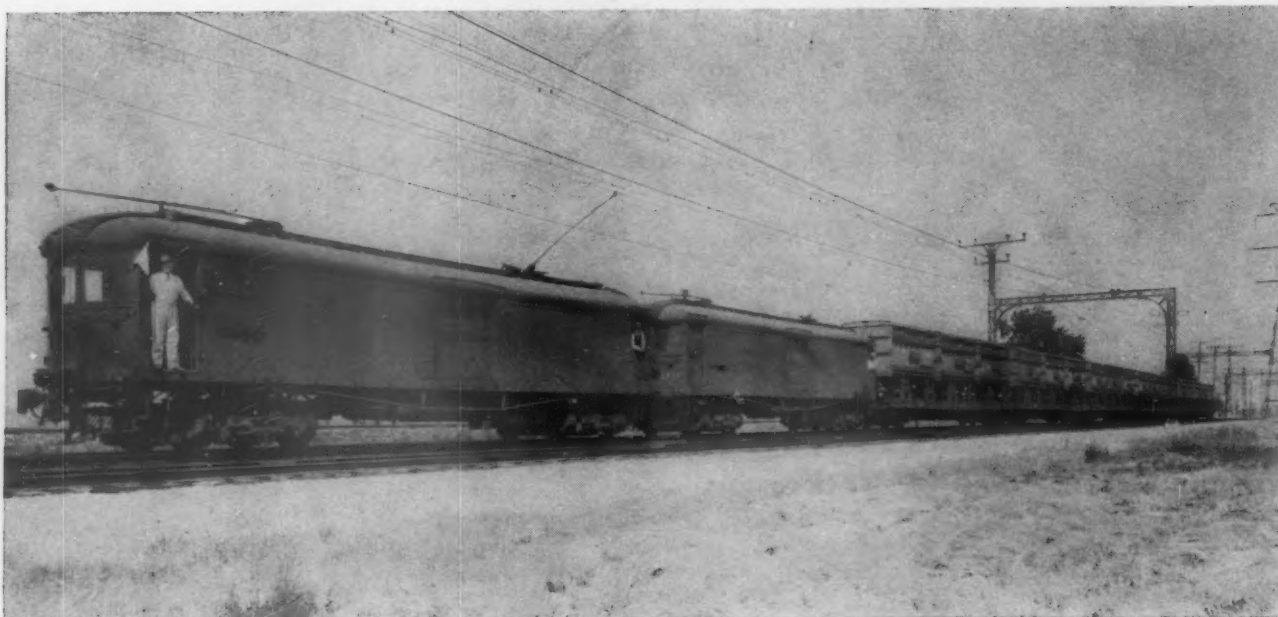
The North Shore has no tracks of its own into Chicago, but gains entry by trackage rights over the elevated lines of the Chicago Transit Authority. This has made the conduct of a freight business in and out of Chicago somewhat difficult. Being an electric line, in the 1920's and 1930's the North Shore operated day, evening and night "Merchandise Dispatch" service between Chicago

and Milwaukee for accommodation of L.c.l. freight. These trains were made up of multiple-unit "box-motor cars," capable of pulling several standard freight cars, and which could be operated over the elevated lines within Chicago limits.

The C. N. S. & M. used a freight terminal on the north side of Chicago, at some distance from the commercial centers of the city. As a result the road began to feel the effects of truck competition very early. To offset it, the North Shore decided to combine the advantages of truck and rail in a "ferry truck" service for handling bulk L.c.l. Under this arrangement the North Shore furnished the highway semi-trailers, and also transported them over the rails. This enabled the line to recapture some of the L.c.l. business which had been lost to competing carriers.

In 1932 the handling of company semi-trailers had proved so successful, from an operations viewpoint, that the service was opened for use by all highway carriers. Rates averaged 13 cents a loaded trailer-mile, or substantially less than it would cost the trucker to move over the highway. Traffic flourished for a while, until an unregulated all-out truck rate war broke out between Chicago and Milwaukee. To meet this condition, the average rate for rail service was reduced to about 10 cents, but varied according to the length of the trailer being transported.

The North Shore's basic carload freight service is performed as a bridge carrier between steam railroads. Because of its lack of facilities in Chicago for handling carload freight, it is unable to run through Chicago-Milwaukee freight service, although interchange freight from steam lines destined to Milwaukee can be handled. Therefore, when the decline in L.c.l. business reached the point where it no longer justified continuation of service, there were no other trains on which the highway semi-trailer business could be handled. Hence, the company experimented with the operation of two trains primarily for the handling of this semi-trailer business. Experience showed that this service, because of the lack



A 1927 North Shore train handling highway semi-trailers. The train is being pulled by "box-motors," and is of particular interest because each of the 60-ft. flat cars carries three semi-trailers

of other supporting traffic, cost more to provide than the available revenues could support. Finally, on April 30, 1947, the North Shore Line completely discontinued all highway semi-trailer rail service.

Proves Profitable on the New Haven

When the New Haven inaugurated its service for highway semi-trailers in 1937, it was lightly patronized. But in the intervening years traffic has steadily increased from less than 30 semi-trailers a week, to over 300 a week, producing well over a half million dollars in gross revenues.

The New Haven's rates for this service were intentionally set lower than the cost of moving the same semi-trailer over the highway, but high enough to assure an ample gross revenue and *net* revenue. At the time the service was installed it was the practice of bigger trucking companies to hire "gypsy" truckers to handle loads for them during peak periods. This arrangement was unsatisfactory for a number of reasons, including the fact that these "gypsies" could, for a consideration, be persuaded to divulge information concerning the traffic of competing companies. Intensive solicitation by the New Haven, emphasizing the economy of using rail service in lieu of over-the-road transportation, brought the service to the attention of large truckers throughout New England. Once the truckers themselves learned the economy of this rail service, traffic began to grow, and has been growing ever since.

In addition to the traffic of the regular highway truckers, the New Haven has utilized its own service, through its highway subsidiary, the New England Transportation Company, for the handling of some of the railroad's own l.c.l. freight. On this operation, the use of highway semi-trailers has saved as much as 24 hours in transit time and \$2.50 a ton in handling costs.

Railway transportation of highway semi-trailers offers many definite advantages to the over-the-road trucker. It permits him to realize greater capacity with which

to meet peak traffic loads with very small investment, and at an exceedingly reasonable cost. Heavily loaded trailers can be moved about within cities or terminal areas by light tractors, and one tractor can handle several loads a day. However, movement over the road requires a powerful tractor for every semi-trailer moved. Today, an over-the-road tractor unit capable of handling the semi-trailers now being widely used costs upwards of \$13,000. By using rail service the trucker not only move his loads at less expense, but also reduces his investment requirements for expensive road tractors. Weight limits for movement by rail are much higher than for movement over the public highways, so the trucker who sends his semi-trailers by rail can regularly "overload" his trailers—thereby realizing greater return from each movement—where weight limits for city movement are higher than limits on state highways. Truckers have been quick to realize these potential savings and consequently have given the rail services offered good patronage.

Service Presents Problems

Railroad transportation of loaded highway semi-trailers is not as easy and simple as it appears. Experience has shown that there are many problems to be surmounted. Flat cars now being used for this service must be specially equipped, at a cost of \$600 or more a car, and must be restricted to this service. Because this traffic tends toward definite peaks and valleys, the economics of the operation would be greatly improved if these cars could be used for other types of service during slack periods.

Loading the flat cars is also a problem when there are many semi-trailers to be loaded at once. Tractors drive the semi-trailers directly on to the flat car over a special ramp placed at the end of one track. If there are 15 or 20 cars to be loaded at once, loading can be extremely time consuming because only one semi-trailer can be loaded at a time. The C. G. W. meets this problem

by breaking its flat cars into small groups on adjacent tracks and loading them simultaneously.

The actual loading of merchandise into the semi-trailers is done by the trucking company's forces. Railroads have found that trailer loading sometimes must be watched to assure proper loading and packing procedures. Actually, there have been few damage claims from this source, but roads offering this service are vigilant in looking for possible sources of trouble. On the other hand, trucking companies using rail service report fewer damage claims on semi-trailers moved by rail as compared with those moved by highway.

The railroads also found that truckers often keep their older semi-trailers for movement via rail. (This is partly due to the fact that there are very few new semi-trailers being manufactured which are small enough to fit two to a 50-ft. flat car.) Because these trailers are usually loaded much more heavily than if they were to move via highway, there have been cases of semi-trailers collapsing while in transit.

Another problem has been the increasing length of

semi-trailers being used by highway carriers. The economics of the operation, from the railroads' viewpoint, require loading two semi-trailers to a flat car. Fifteen years ago, when most trailers were between 20 and 24 ft. long, two could easily be loaded on a 50-ft. flat car. However, with today's semi-trailers running to 30 and 32 ft., and even more, this presents a problem. There are few flat cars in service today which are over 50 ft. in length. Longer cars are more apt to run into clearance restrictions, and are not well suited for other non-trailer types of lading.

To some degree at least, the economies of operating a railroad service for movement of highway semi-trailers are reflected in the lower rates charged. Railroad men point out that the use of highway semi-trailers on railroad cars involves transportation of a high proportion of non-revenue dead weight. They also point out that using conventional highway semi-trailers on flat cars provides poor utilization of available cubic capacity. It is possible that continued development will find solutions for these problems.

113,345 Freight-Train Cars Ordered in First Ten Months

**Equipment purchases totaling \$924,956,600 also include 2,322 Diesels,
15 steam and 12 electric locomotives and 42 passenger-train cars**

Domestic railroads and private car lines ordered 113,345 freight-train cars costing an estimated \$572,446,600 during the first ten months of 1950, according to reports published in *Railway Age*. This total exceeds the number of freight-train cars ordered in the full year during most years since 1910, according to compilations of the American Railway Car Institute. In the full year 1910 cars ordered numbered 120,337; in 1911—115,618; in 1912—194,353; in 1913—136,033; in 1916—159,376; in 1922—178,210; in 1924—145,616; and in 1947—120,163. Figures for at least three of those years—1910, 1911 and 1947—are expected to be topped when 1950 has been completed. All freight-train cars reported ordered this year are listed in the accompanying table.

All equipment reported ordered during the January-October period this year has called for an estimated aggregate expenditure of \$924,956,600, and, in addition to the freight-train cars, includes 2,322 Diesel-electric locomotive units, 15 steam and 12 electric locomotives costing about \$347,666,000, and 42 passenger-train cars costing approximately \$4,844,000. The value of equipment ordered in this year's first ten months exceeds equipment expenditures by Class I railroads in any twelve months of the preceding 28 years, with one exception, according to Association of American Railroads statistics. In that year, 1949, capital expenditures by Class I railroads for locomotives and cars totaled about \$943,000,000.



FREIGHT-TRAIN CARS REPORTED ORDERED, JANUARY-OCTOBER, 1950, INCLUSIVE

Purchaser	No.	Type	Builder	Purchaser	No.	Type	Builder
Akron, Canton & Youngstown	50	Covered Hopper	Greenville Steel Car	Missouri Pacific	810	Hopper	R. R. Shops
Ann Arbor	75	Covered Hopper	Pullman-Standard		750	Box	R. R. Shops
	100	Box	Amer. Car & Fdy.		800	Gondola	R. R. Shops
Atchison, Topeka & Santa Fe	500	Box	Pullman-Standard		200	Covered Hopper	R. R. Shops
Atlantic Coast Line ..	400	Covered Hopper	Amer. Car & Fdy.		50	Pulpwood	R. R. Shops
	700**	Pulpwood	Pullman-Standard	Montour	300	Hopper	Greenville Steel Car
	600**	Covered Hopper	Pullman-Standard	New Jersey, Indiana & Illinois	100	Box	Amer. Car & Fdy.
Baltimore & Ohio ...	1,000	Hopper	Amer. Car & Fdy.	New York Central ...	1,000	Hopper	Amer. Car & Fdy.
	220	Automobile	Amer. Car & Fdy.		1,000	Hopper	Pullman-Standard
	1,000	Gondola	Bethlehem Steel		2,000	Box	Pullman-Standard
	1,000	Hopper	Bethlehem Steel		1,500**	Box	Pullman-Standard
	1,000	Box	Amer. Car & Fdy.		1,000	Hopper	General American
	1,000	Hopper	Pullman-Standard		1,000	Gondola	Greenville Steel Car
	300	Flat	General American		1	Flat	Greenville Steel Car
Bangor & Aroostook...	300	Box	R. R. Shops		1,500	Gondola	Bethlehem Steel
Boston & Maine	10#	D-F Box	Magor Car		5,500	Box	Despatch Shops
			General Amer.-Evans		2,000	Gondola	Despatch Shops
Central of Pennsylvania	125	Hopper	Bethlehem Steel		1,500	Hopper	Despatch Shops
Central Vermont	2	Air Dump	Magor Car		500	Refrigerator	Despatch Shops
Chesapeake & Ohio ..	3,000	Hopper	Amer. Car & Fdy.	Norfolk & Western ..	3,000	Hopper	R. R. Shops
	1,000	Hopper	Bethlehem Steel		500	Box	Pullman-Standard
	1,000	Box	Pullman-Standard	Northern Pacific	1,500	Box	R. R. Shops
Chicago, Burlington & Quincy	1,900	Box	R. R. Shops		100	Caboose	R. R. Shops
	800	Hopper	R. R. Shops		100	Covered Hopper	R. R. Shops
Chicago, Indianapolis & Louisville	100	Box	General American	Pacific Fruit Express..	2,100	Refrigerator	Co. Shops
Chicago, Milwaukee, St. Paul & Pacific ..	600*	Refrigerator	R. R. Shops	Pennsylvania	3,000**	Gondola	Pullman-Standard
Chicago, Rock Island & Pacific	1,000	Box	Amer. Car & Fdy.		2,000**	Gondola	Bethlehem Steel
	69	Covered Hopper	Amer. Car & Fdy.		2,000**	Box	Pressed Steel Car
	350	Box	General American		1,500**	Box	Amer. Car & Fdy.
	500	Flat	R. R. Shops		1,000**	Box	General American
Chicago & Eastern Illinois	200	Gondola	R. R. Shops		500**	Box	Greenville Steel Car
	300	Box	R. R. Shops		3,200	Gondola	Amer. Car & Fdy.
	200	Box	Pullman-Standard		1,800	Gondola	Pullman-Standard
	200	Box	Amer. Car & Fdy.		1,000	Box	General American
	25	Covered Hopper	Pullman-Standard		500	Gondola	General American
	50	Covered Hopper	Thrall Car		2,500	Box	Pressed Steel Car
	50	Flat	Thrall Car		500	Box	R. R. Shops
Chicago & North Western	2,000	Box	Pullman-Standard		250	Gondola	R. R. Shops
Delaware & Hudson..	500**	Box	Pullman-Standard	Reading	2,000	Hopper	Bethlehem Steel
	1,000	Hopper	Bethlehem Steel		500	Gondola	Bethlehem Steel
Delaware, Lackawanna & Western..	300	Covered Hopper	Amer. Car & Fdy.		500	Box	Amer. Car & Fdy.
	500	Gondola	Amer. Car & Fdy.	St. Louis & Belleville Electric	50	Hopper	Amer. Car & Fdy.
Denver & Rio Grande Western	500	Hopper	Pressed Steel Car	St. Louis-San Francisco	500	Box	Pullman-Standard
	25	Covered Hopper	Amer. Car & Fdy.		135	Covered Hopper	Pullman-Standard
	50	Flat	R. R. Shops		100	Flat	Amer. Car & Fdy.
Detroit, Toledo & Ironton	250	Box	Greenville Steel Car	Seaboard Air Line ...	500	Hopper	Pullman-Standard
Detroit & Toledo Shore Line	100	Covered Hopper	Greenville Steel Car		500	Box	Pullman-Standard
Erie	105	Flat	R. R. Shops		300	Covered Hopper	Pullman-Standard
	100	Covered Hopper	R. R. Shops		400	Gondola	Bethlehem Steel
Fruit Growers Express	1,000	Refrigerator	Pacific Car & Fdy.		25	Caboose	Int'l. Ry. Car & Equip.
	200	Refrigerator	Co. Shops	Southern	2,000	Box	Pullman-Standard
General American Transportation Corporation	100	D-F Box	General Amer.-Evans		250	Covered Hopper	Pullman-Standard
Great Northern	250	Gondola	Amer. Car & Fdy.	Southern Pacific	5,500	Box	Pullman-Standard
	3	Flat	R. R. Shops		100	Hopper	Amer. Car & Fdy.
Green Bay & Western	200**	Box	Pullman-Standard		250	Covered Hopper	Amer. Car & Fdy.
Gulf, Mobile & Ohio.	100	Covered Hopper	Amer. Car & Fdy.		100	Gondola	Amer. Car & Fdy.
	200	Automobile	Amer. Car & Fdy.		100	Gondola	R. R. Shops
	100	Pulpwood	R. R. Shops		1,000	Automobile	R. R. Shops
	300	Flat	R. R. Shops		1,000	Box	R. R. Shops
Illinois Central	1,000	Box	R. R. Shops		1,000	Gondola	R. R. Shops
	120	Covered Hopper	Amer. Car & Fdy.		50	Caboose	R. R. Shops
Lake Superior & Ishpeming	50	Box	Pullman-Standard	Spokane International	75	Flat	Amer. Car & Fdy.
Lancaster & Chester ..	20	Box	Pullman-Standard		23	Covered Hopper	Amer. Car & Fdy.
Lehigh & New England	35	Covered Hopper	Bethlehem Steel	Spokane, Portland & Seattle	200	Gondola	Amer. Car & Fdy.
Lehigh Valley	1,000	Box	Bethlehem Steel		12	Caboose	R. R. Shops
	500	Gondola	Bethlehem Steel	Sunray Oil Corp.	200	Tank	Amer. Car & Fdy.
	100	Covered Hopper	Bethlehem Steel		250	Hopper	Amer. Car & Fdy.
	500	Box	Pullman-Standard	Texas & Pacific	100	Covered Hopper	Amer. Car & Fdy.
	50	Flat	R. R. Shops		200	Box	Pressed Steel Car
Louisville & Nashville	2,000	Box	Pullman-Standard		100	Flat	R. R. Shops
Mather Stock Car ...	130	Refrigerator	Co. Shops	Union Pacific	150	Gondola	R. R. Shops
Minneapolis, St. Paul & Sault Ste. Marie.	75	Hopper	Amer. Car & Fdy.		2,000	Gondola	General American
	400	Box	R. R. Shops		1,000	Box	Amer. Car & Fdy.
	100	Hopper	R. R. Shops		3,500	Box	R. R. Shops
Missouri-Kansas-Texas	100	Covered Hopper	Pullman-Standard		500	Flat	R. R. Shops
	300	Gondola	Pullman-Standard	Union Tank Car	500	Stock	R. R. Shops
	500	Box	Pressed Steel Car		225	Tank	Co. Shops
	500	Box	Amer. Car & Fdy.	Wabash	500	Box	R. R. Shops
				Warren Maritime Corp.	200	Tank	Amer. Car & Fdy.
				West India Fruit & Steamship Co.	150	Box	Amer. Car & Fdy.
				Western Fruit Express	450	Refrigerator	Co. Shops
					450	Refrigerator	Pacific Car & Fdy.
				Western Maryland ...	410	Gondola	Bethlehem Steel
					100	Covered Hopper	Amer. Car & Fdy.
					100	Box	Greenville Steel Car
					50	Box	Pressed Steel Car
					40	Flat	R. R. Shops
				Wilson Car Lines	100	Refrigerator	R. R. Shops

** To be leased from the Equitable Life Assurance Society.

* To be leased from the General American Transportation Corporation.

* Ultimate ownership not yet settled.

Illinois Central Car Upgrading Method Pleases Shippers and Reduces Claims

A waterproof lining prevents sharp objects tearing sacked products, insulates against contamination, and makes car grain tight

The Illinois Central recently demonstrated a new type of paper for lining box car floors, sides and ends which has proved 100 per cent successful after 1 1/4 years' experience. During this interval no damage claim has arisen on any commodity transported in cars lined with this paper, which to date has been applied to approximately 500 cars.

The paper, made by the J. J. Lipp Paper Company, 323 West Polk street, Chicago 7, is waterproofed and consists of two sheets of No. 35 kraft paper cemented together with asphaltum, reinforced with rayon yarns and creped after lamination in the machine direction by a water creped process.

The paper serves three principal purposes in reducing damage and easing the box car shortage. As a covering, it prevents slivers, nails and other sharp protruding objects from tearing sacks, and it makes floors, sides and ends grain tight. The paper also offers protection against dirty and oily floors. It forms a contamination-proof covering between the oil or other undesirable material on the floor and the commodity being shipped. A tape used in conjunction with the paper serves to seal cracks between lining boards and to cover sheet metal patches used in repairs. The tape can also be used with the paper for such applications as sticking the paper around door posts and to cover any place that is too wide for the tape alone.

Permits Lift-Truck Unloading

The manufacture of the paper is such that it has an 18 per cent minimum stretch in the machine direction,

which is sufficient to prevent tearing from road or switching impacts. The stretch action further acts as cushion to the lading. The lining will last for several trips with commodities in bags, which may be unloaded either by hand or lift truck. The paper is strong enough to permit a lift truck with a load up to two tons to turn at right angles; it will stretch but will not tear. For transporting bulk commodities unloaded by scoops the paper normally lasts only one trip.

The paper is furnished in rolls 164 ft. long and 62 in. wide. The length is sufficient to cover two average box car floors, or one box car floor and the sides and ends half way up. The width is such that when the two strips are laid edge to edge along the length of the car the outside edges fold up about a half foot along the sides of the car.

Applying the Paper

Application of the lining is quick and simple. To line the floor only requires about 10 minutes, the complete car up to 30 minutes. The paper is rolled out along one side of the car with one edge in the approximate center and with the outside edge folded so that it extends up the side of the car about a half foot. The ends of the roll fold up at the car ends about a half foot. The same thing is done with the other half of the car. The two lengths of paper lining are then joined along the center with a strip of the 2-in. tape.

The sections by the doors are cut to the outside edge of the flooring and folded under. The sections of the paper along the sides and ends are then fastened either by spot taping or by stapling. Where stapling is employed the staples are applied with an automatic hammer which secures the paper merely by striking. The stapling or spot taping is done at intervals of 18 in. to 24 in. Where staples are used they may be covered with a continuous strip of the tape.

Below left—The two lengthwise floor strips of paper are joined along the center of the car by tape and on the opposite edges and the ends by either stapling or taping. Sheet-metal repairs to the sides are covered with the tape

and paper to eliminate any tearing of sacks from this source. Below right—Application of the lining is fast and easy, requiring about 10 minutes for a floor and up to 30 minutes for a complete car, including sides and ends



Retarders and Intensified Supervision Cut Switching Damage to Equipment and Lading

By C. E. McCARTY
Manager, Potomac Yard
Richmond, Fredericksburg & Potomac



At Potomac Yard, Alexandria, Va., a determined effort on the part of the management to reduce the amount of physical damage to freight cars during yard classification has resulted in a reduction of about 87 per cent in such damage, with, it is believed, a corresponding decrease in injury to the lading of those cars.

We realized early in our campaign to reduce damage to cars in classification that any study must include a report, prepared as early as possible after the completion of the day's work, showing information necessary to trace the source of damage. For that purpose a report was inaugurated showing: (1) The initial and number of each car found damaged in the classification yard after having passed, without exceptions, the initial inspection on arrival; (2) the number of the track in which it was found; and (3) the extent of damage. This report is on the writer's desk by 9 o'clock each morning, and it enables us to determine the exact time such cars are classified over the hump and so to fix the responsibility with the car-retarder operator or train crew involved. In order to keep the subject of rough handling always before those engaged in classifying cars, i.e., car-retarder operators and train and engine crews, a second report is issued daily which shows the initials and numbers of the damaged cars, time of classification and the track number and extent of damage.

These reports, coupled with daily running statements which are constantly followed by the writer and members of the staff, and monthly reports similar to those reproduced with this article, plus disciplinary action if circumstances warrant it, have constituted the plan under which our success has been achieved.

In addition, of course, a high standard of maintenance for the retarders and yard grades is necessary in order to provide the retarder operators with proper working tools. As a result of the better switching performance secured in this way the cost of repairs to damaged cars

TABLE 1—CARS DAMAGED IN CLASSIFICATION

Year	Northbound			Southbound		
	Total Cars Classified	Total Cars Damaged	Cars Damaged per 1,000 Classified	Total Cars Classified	Total Cars Damaged	Cars Damaged per 1,000 Classified
1944	788,499	1,887	2.39	659,080	1,688*	2.56
1945	703,812	2,607	3.70	589,967	2,128*	3.61
1946	682,928	1,860	2.72	589,834	1,257	2.13
1947	585,715	980	1.67	534,937	591	1.11
1948	550,696	789	1.40	500,786	345	0.69
1949	503,421	242	0.48	459,738	155	0.34
8 Mos. 1950	335,299	137	0.41	303,364	134	0.44

*Southbound yard operated as "rider" hump prior to Oct. 22, 1945, with complete retarder classification effective Jan. 1, 1946.

TABLE 2—COST OF REPAIRING DAMAGE OCCURRING IN CLASSIFICATION

Year	Northbound			Southbound		
	Total Cars Classified	Total Cars Damaged	Cost of Repairs	Total Cars Classified	Total Cars Damaged	Cost of Repairs
1948	550,696	789	\$9,157	500,786	345	\$4,013
1949	503,421	242	3,500	459,738	155	2,883
8 Mos. 1950	335,299	137	2,255	303,364	134	2,707
Cost Per 1000 Cars Classified						
1948			\$16.63	1948		\$ 8.01
1949			6.95	1949		6.27
8 Mos. 1950			6.73	8 Mos. 1950		8.92

TABLE 3—IMPACT REGISTER TESTS

As a further means of checking and controlling classification yard damage, periodical tests are made with impact registers. The results of the last two periodical checks are summarized as follows:

Period	Number of Tests	Impacts Registered by Zones*				
		1	2	3	4	5
July 11-14, 1950	59	9	28	12	9	1
Aug. 15-19, 1950	66	10	29	23	4	0

*Zone 1 and first half Zone 2
Second half Zone 2
Zone 3
Zone 4
Zone 5

Normal Handling
Borderline
6-7 miles per hour
8-9 miles per hour
10-11 miles per hour

TABLE 4—SUMMARY OF CAR DAMAGE DURING A RECENT MONTH

Broken couplers	4
Cars off center	9
Cars derailed	0
Train lines broken	4
Lading shifted (Including cars with ends or sides bulged)	15
Doors damaged	5
End sills, center sills or end plates damaged	0
Miscellaneous	4

has been cut from more than \$12 per 1,000 cars classified in 1948 to about \$6.62 during 1949, and \$7.77 during the first eight months of 1950. This is a not insignificant saving.



View of the southbound hump at Potomac Yard, under floodlights, showing retarders



A portion of the southbound classification yard, seen from the hump



Photo by Turner Studio

Three cuts of cars are in motion on the descending side of the northbound hump. The first car of the cut in the immediate foreground has just entered the retarder



Photo by Turner Studio

Southbound repair track, with wheels being changed under Master Mechanic Kidwell's direction



The yardmaster in his office can communicate by loudspeaker or radio with crews in the yard, on interchange runs



The yardmaster's office is on the top floor of a three-story brick tower near the center of the yard

Modern communications systems are an important part of the facilities at the new freight classification yard constructed by the Chicago, Burlington & Quincy on the north side of the Missouri river opposite Kansas City, Mo. About 600 loaded cars arrive daily on through trains; of these, about 75 cars are delivered to industries and 525 are for interchange with 10 other railroads in Kansas City. Cars from industries and interchange are brought to this yard to make up about eight to ten outbound through trains daily. Counting cars in and out, about 3,500 cars are handled through the yard daily.

Murray yard is a flat yard made up of several component parts. The "D yard" consisting of 18 tracks, located to the north of the yardmaster's tower, is used primarily for making up road trains. These switching operations are performed on the leads at both ends of this yard. North-bound trains, for example, are made up of about six classification blocks: (1) St. Joseph, (2) St. Joseph branch, (3) Sioux City, (4) Council Bluffs, (5) Omaha, and (6) Lincoln and beyond. These blocks from different yard tracks are pulled and assembled in a train on one of the long D-yard departure tracks.

Inbound road trains arrive on one of the long receiving tracks. Then, by flat switching at one or both ends of such a train, the cars are classified on the 21 tracks in the "C yard," which is toward the south end of the entire yard area. One classification is made for each of the 10 roads with which cars are interchanged. The cars which the Burlington is to deliver to its freight-house and various industries in Kansas City are in two classifications, and the cars for delivery in the North Kansas City industrial area, to the east of Murray yard, are in five classifications.

All these switching operations, to make up outbound road trains and to break up inbound trains, are under

Loudspeakers and

the direction of the yardmaster. Formerly he directed these activities by walking up and down the yard, which is 1.5 miles from end to end. With this method, there was no means for him to be constantly informed on difficulties or changes in the circumstance that arose from minute to minute. And there was no way for him quickly to get hold of a switch crew to change instructions, as, for example, a change in destination for a car.

Yardmaster Stays in Tower

Now, with the new system, the yardmaster stays in his office in the elevated tower near the center of the yard. There he can see where nearly all the crews are at work in the entire length of the yard. If the foreman of a switch crew is uncertain about the switching of some car, he walks to one of the 33 talk-back loudspeakers (see illustration), and pushes a button mounted on the speaker stand. This lights a lamp on the yardmaster's panel and sounds a buzzer.

When the yardmaster is ready to answer, he throws a key adjacent to the lighted lamp, thus connecting his loudspeaker receiver to the circuit to the talk-back. He then presses a switch on the microphone stand and speaks into his microphone to answer the foreman. When he releases the switch on the microphone stand, the circuit is reversed for the foreman to talk back to the



Talk-back loudspeakers are placed along the switch leads for use by foremen and switchmen



Engineman in cab of Diesel switcher talks with yardmaster by radio

Radio Hasten Cars to Consignees

Burlington yardmaster in elevated tower uses talk-back speakers to talk with switch foremen in yard, and uses radio to talk to crews on locomotives switching to yards or serving industries within 10-mile radius

yardmaster. The switch foreman, after first pushing the button to call the yardmaster, makes no further use of it. The loudspeaker at the foreman's location will not only transmit the message sent out by the yardmaster, but will also pick up what the foreman has to say and transmit it to the yardmaster. It is by these characteristics that it has become known as a talk-back speaker.

System Includes Telephones

Large 25-watt paging loudspeakers were installed at 30 points in the yard. At some of these installations there are two or more speakers faced in opposite directions. All of these paging loudspeakers are indirectly connected at all times to two circuits which extend throughout the entire yard, as well as to a separate loudspeaker in the yardmaster's office. Also connected to this two-wire circuit are 16 conventional wall-type telephones which are in booths or boxes in various sections of the yard or in offices of car repairmen or others who have occasion to make hurry-up calls.

When any man needs to issue a general warning or to get in touch quickly with some man elsewhere in the yard he goes to one of the 16 telephones, operates the push-to-talk button and speaks into the usual mouthpiece. Whatever he says is reproduced on all the paging speakers on that particular circuit throughout the yard and in the yardmaster's office.

Likewise, the yardmaster can issue a call on these paging speakers. On his panel he has keys by means of which he can cut in on the paging speakers to the north of his tower or to the south. If he throws both keys he can put out a call on all of the paging speakers throughout the yard. This paging speaker system was designed for, and is actually used, only for calling a particular man to tell him to go to a telephone or to a talk-back speaker to make contact with some person quickly.

A secondary use of this paging system is to issue general warnings or announcements. For example, if a dragging brake beam is noticed on a train that is just pulling out of the yard, a general call over the paging

speakers would be heard by the engine or train crew or by someone else who could take steps to stop the train. Also when incoming trains are approaching, the yardmaster puts out a general call stating the number of the yard track on which the train is to pull in. This call is for information of various employees, such as car inspectors, grain inspectors and others.

The 11 switch engines in service in the Murray yard, also serving industries and operating interchange runs, are all equipped with radio for two-way conversation between locomotives or with any of five offices: (1) the yardmaster's tower, in the center of the yard; (2) a second yardmaster's office at C yard in the south end of Murray yard; (3) a yard office at Tenth street in North Kansas City; (4) the trainmaster's office; and (5) the yard office at Murray yard. These five offices are connected by a two-wire circuit which extends to the radio sending and receiving equipment at a fixed station which is in a grain elevator near the yard, the antenna on the top of the elevator being 185 ft. above ground level. The radio transmitters and receivers in the fixed station and on the locomotives are Bendix type MRT-1E, operating at 159-690 m.c. The power output is about 12 watts.

Special Benefits of Radio

The two-way radio communication is used numerous times every day for conversations between the yardmaster and crews on the switch engines. In many instances these calls are with reference to unexpected circumstances which require an answer in a hurry—whereas without the radio, delays would be occasioned, because someone would have to walk a considerable distance; a car would have to be reswitched; or an engine and crew would have to make a return trip to the other end of a yard.

During some seasons of the year, heavy fogs rise from the Missouri river, nearby, and roll in over this yard. When the fog is so thick that hand signals cannot readily be seen, the foreman of a crew will use one of the talk-back speakers to tell the yardmaster what move is to be made. Then the yardmaster uses the radio to tell the engineer that it is all right for him to "back up," "go ahead," or to "double groups over" when making up an outbound train. The terminal superintendent, J. S. Sloan, reports that "the radio makes yard operation much safer, from the standpoint of train accidents and personal injuries, in that the yardmaster, located in the tower, can

see the moves being made, and also calls what moves there are to be made, and he can notify the engineer what the crew is going to do. Where there are several engines working in the same yard there are times that some new employees, who do not properly understand the work, will start to make the wrong move, and a yardmaster can prevent an accident by using the radio to tell the engineer not to move until he advises him to do so."

In numerous instances, industries have telephoned to the yardmaster to request that cars be moved or respooned on tracks serving warehouses or factories. By use of the radio, the yardmaster can call the foreman of the switching crew working in the vicinity of the industry, to direct that the required switching moves be made. The shippers are thereby given service quickly, whereas previously, without the radio, the yardmaster had no means of knowing the exact location of crews engaged in switching in the industrial areas, and about the only way to locate them was to walk, or use an automobile to search for them.

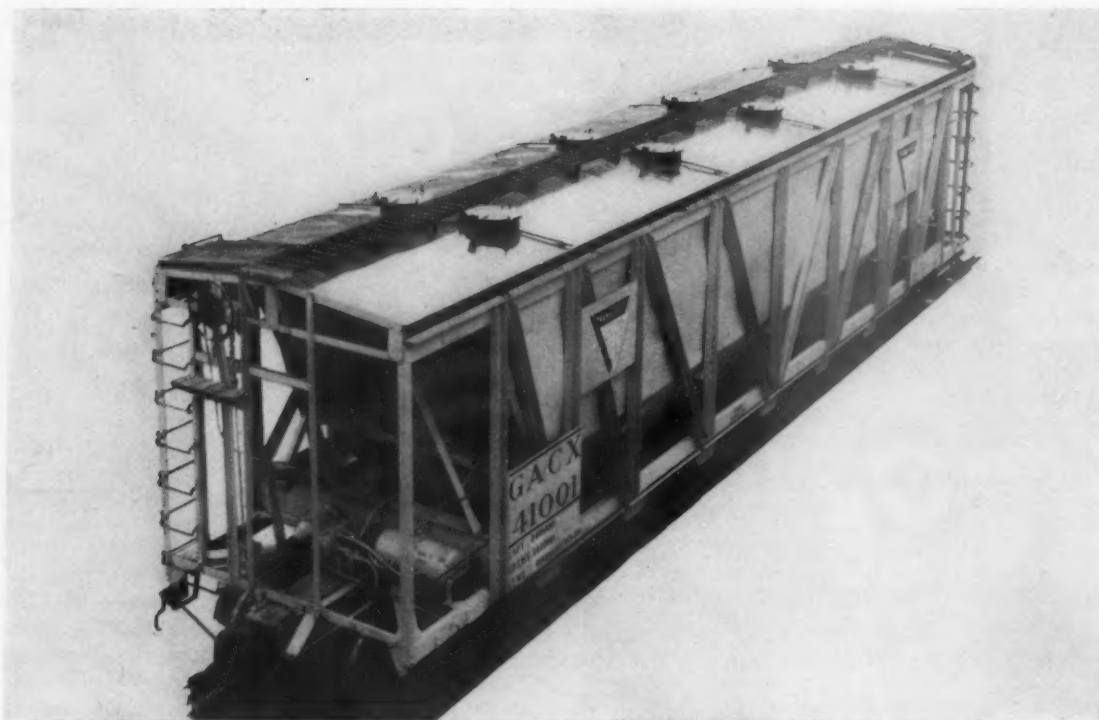
Among other situations where radio proves its usefulness, several months ago the Goodyear Rubber Company telephoned the yardmaster that a fire had broken out in its plant. By the radio, the yardmaster was able to instruct a switch crew to proceed at once to Goodyear and pull four cars spotted on tracks at that plant, thus saving the cars and lading.

In a special instance, the radio was helpful in getting a sick man to a hospital sooner. The "field man" in a switch crew was riding on the ladder on a car while signaling his engineer to shove cars along to make a coupling. The engineer saw the field man fall off the car, and used the radio to tell the yardmaster. The yardmaster called another engine crew on the radio, directing that crew to get a stretcher and proceed on a clear track down through the yard to get the sick man and bring him back to the office where an ambulance was waiting to take him to the hospital. Later it developed that the man had had a serious heart attack. Without the radio, some one on the crew, which was coupling the cars, would have had to walk to a point where he could communicate with the yardmaster, and the whole procedure would have been much slower.

The communications facilities in Murray yard were planned and installed by railroad forces under the general direction of H. H. Hasselbacher, superintendent telegraph.



THIS NEAT MODERN STRUCTURE houses the headquarters and freight and express station of the six-mile Hillsboro & North Eastern up in the Wisconsin dairy country



The hatch locations in the roof of one of the Trans-Flo cars now being used in bulk shipment

Bulk Transportation by Trans-Flo

General American covered hopper car is especially designed for the bulk shipment of flour, plastics and chemicals

The Trans-Flo covered hopper car, recently developed by the General American Transportation Corporation, Chicago, is especially designed for the sanitary and efficient bulk transportation of dry, granular or powdered commodities, such as flour, plastics, chemicals and pharmaceuticals. It is not intended for the shipment of materials normally handled without fear of contamination or infestation in conventional covered hoppers which can be unloaded by gravity, but, utilizing a pneumatic unloading system, it gives full protection to lading and extends the advantages of bulk handling to numerous commodities formerly requiring transportation in individual bags or packages.

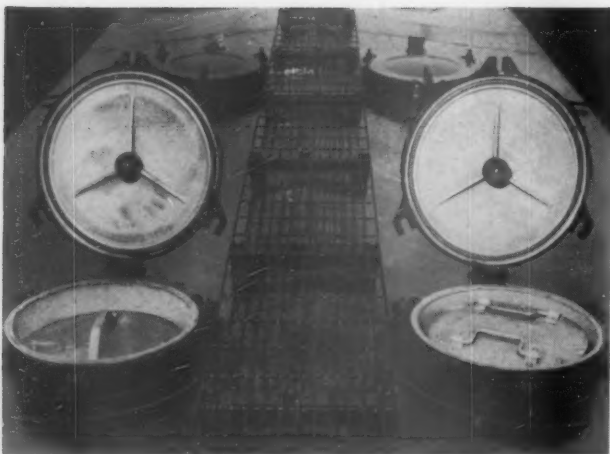
Twenty-five Now in Flour Service

About 25 of the new Trans-Flo cars are now in flour service and have demonstrated not only important savings in material and labor costs, but such advantages as greatly improved sanitation, freedom from infestation, higher capacity loads, reduced loading and unloading

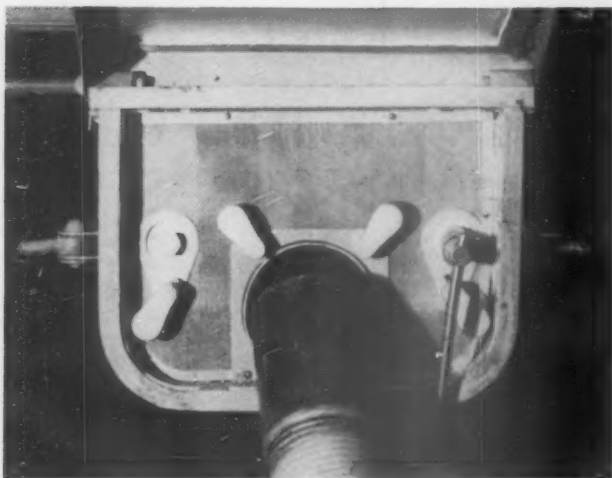
time, and elimination of damage claims. The car, slightly more than 55 ft. long over coupler pulling faces, has a nominal capacity of 140,000 lb.; light weight of 68,100 lb.; load limit of 141,900 lb.; cubic capacity of 3,150 cu. ft. in two welded stainless-steel compartments, supported in the car superstructure; 70-ton trucks; and Duryea double-cushion underframe.

Estimated Annual Savings

No special studies of savings with commodities other than flour have been made, but in this service, on a 10-day turn-around, it is estimated that each Trans-Flo car will effect an annual saving of about \$8,000, including savings in overhead and shrinkage. This saving is based upon the difference in handling costs associated with the movement of flour in bags in box cars as against bulk shipment in Trans-Flo cars, which eliminates the sacks, a large cost factor. Also, it greatly reduces the total number of man-hours required for loading and unloading. It eliminates paying freight on the sack and reduces the amount of shrinkage considerably. The foregoing savings figure does not include any amortization on the pneumatic equipment necessary to unload the car or the bulk storage bins required to receive the material in bulk. These two cost factors, of course, will vary with each plant. However, it is said that in most cases the pneumatic equipment and bulk stor-



Two loading hatches open while unloading, with filter and dummy filter in place



Unloading nozzle on flexible stainless steel hose is being connected to one of the hoppers



Pneumatic hose used in unloading a Trans-Flo car. A mechanical vibrator is attached to one of the hoppers

age can be amortized in less than three years, due to the large savings associated with the use of the Trans-Flo car.

The new car is the result of over two years of extensive research and testing by General American in close collaboration with the National Biscuit Company and the Fuller Company of Catasauqua, Pa. The investigation was conducted in a special laboratory built by General American at its plant in East Chicago, Ind. This laboratory is equipped with a full-scale section of a Trans-Flo car along with a Fuller Airveyor System, which is used to unload the commodity from the car. Thus, it is possible to conduct demonstrations in the laboratory closely approximating actual conditions at the unloading site.

General Features

While the Trans-Flo is essentially a covered hopper car, it differs from the standard-type car in that it is composed of two large compartments (1,575 cu. ft. each), each having six sets of hopper-type bottoms. It has to be unloaded pneumatically and cannot be unloaded by gravity. A syntron electro-mechanical vibrator, applied to each hopper as it is being unloaded, assures a uniform flow of lading and overcomes any tendency for it to stick to hopper slope sheets. The entire unloading operation can be performed by one man in less than four hours.

Each compartment now has two loading hatches, although some have been built with four. Improvements in loading procedure have made the extra hatches unnecessary.

Trans-Flo cars are furnished on the basis of a 10-year lease. Because they are privately owned, railroads pay a mileage allowance for each mile that the car travels, either empty or loaded. This mileage allowance, in turn, is credited to the lessee's account, thereby reducing the cost of the car to the customer.

No Mechanical Moving Parts

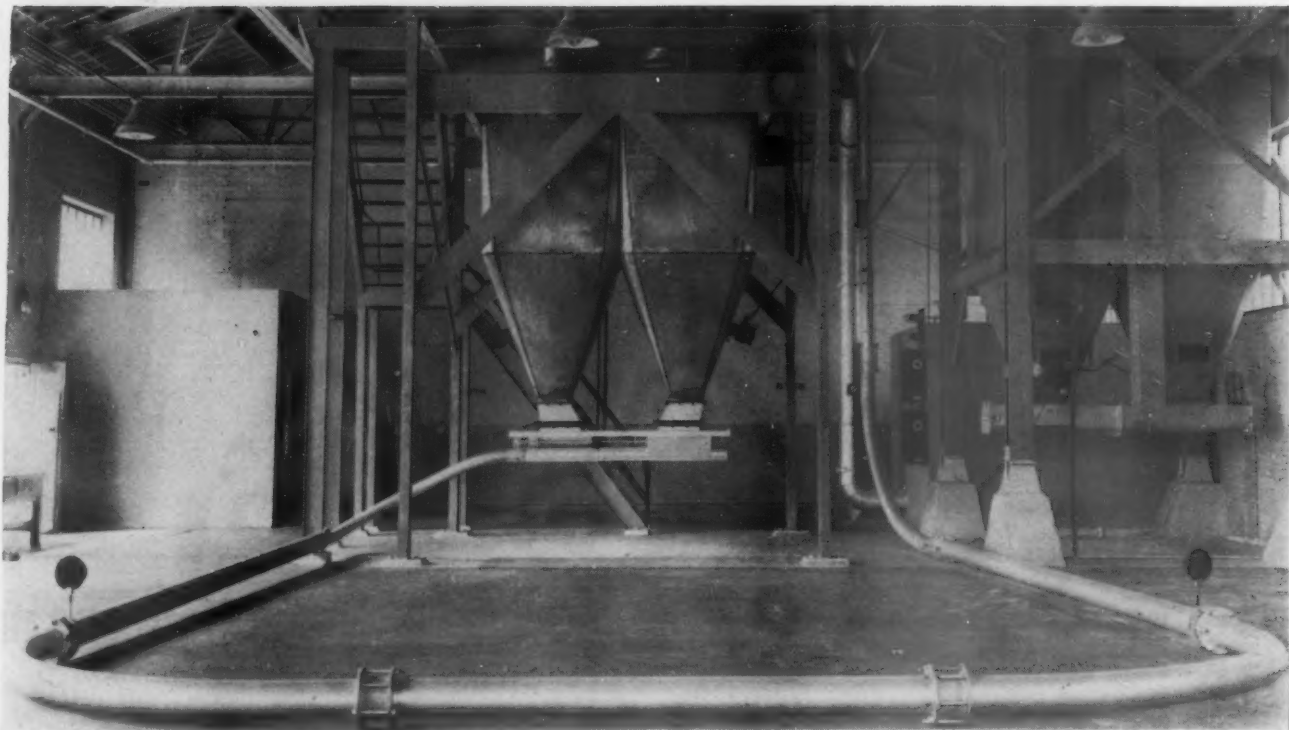
There are no mechanical moving parts in the car, thus eliminating the possibility of mechanical failure which would prohibit prompt unloading at point of destination. The cars may be loaded at the mill by gravity, by merely diverting the millstream into the car. An air-powered spinner has been developed which permits the car to be loaded within inches of the roof. This helps prevent condensation by keeping the air space between the top of the lading and the roof of the bin to a minimum. Condensation is said to be insignificant, summer or winter.

No Infestation or Contamination

Experience indicates that, in the bulk handling of flour by pneumatic equipment, the development of weevils and other internal infestation appears to be almost completely arrested.

Contamination of the lading also is virtually impossible. For example, the roof hatches as well as the unloading nozzle assemblies have filters which prevent any outside contaminating substance from coming in contact with the lading during either loading or unloading operations. The interior welding is ground smooth to minimize the possibility of lading clinging to the welds, and the corners of the hopper bottoms are rounded.

When the car is being filled, the filter is attached to the hatch cover in such a way it cannot become contami-



General American laboratory installed at the East Chicago plant to solve problems such as the bulk handling of dry, granular or powdered materials in a railroad car

nated. When the car is being emptied from the bottom, the hatches are opened and the filters prevent dust or contamination from coming into the car with the outside air.

The hatches are also equipped with a channel to drain out water. As a consequence, the car can be safely emptied even during rain. In transit, the hatch covers carry a wire seal placed by the railroad, and there is no way of raising the hatch cover without breaking the seal.

Bulk Storage Provided

At the point of consignment, the bulk car is spotted at the railroad siding and the Fuller pneumatic conveying system is connected via a flexible hose line to the nozzles on the bottom of the car. The valve gates are opened and the lading, flour, for example, flows from the compartment into the nozzle, whence it is drawn through the pneumatic system to the storage bin, which may be either on the inside or outside of the bakery. Two cars may be unloaded by one man, using the pneumatic system, in an eight-hour shift. Bakeries which lack large bulk storage space within the plant may erect inexpensive storage facilities on the outside, which may be insulated and protected by the plant heating system and thus operate satisfactorily in all climates, through all changes of weather.

Sanitation Advantages

The pneumatic system of moving flour within the plant consists of seamless steel tubing with long-radius bends and machined companion flanges to form perfect joints. Stainless steel is used where necessary in the pneumatic filter and other mechanical parts to give smooth sur-

faces and prevent coating. All parts of the system may be opened for complete sanitary inspection. Since the new method is a conveying system it may be combined with mechanical equipment for completing the killing of insects and the destruction of eggs, and with equipment for removing foreign material from the flour stream.

In the Present Emergency

An important consideration at the present time is the looming war crisis which can have drastic effects on the shipping of food products. Near-at-hand box cars may have to be used for whatever purpose is required, which is a threat to sanitation. Where sacks are used, as has been the practice with flour, there is likely to be a shortage of paper, which will result (and has already, for that matter) in substantial price increases and in decreased availability. In the average box car shipment of flour, 800 lb. of paper are used. A Trans-Flo car carrying 4,140,000 lb. annually, operated on a 10 day turnaround would save approximately 41,000 paper sacks per year, or roughly $\frac{1}{2}$ carload of paper. In place of this paper, the Trans-Flo car would save about 41,000 extra pounds of flour now lost as shrinkage and it would take one less man to handle the unloading.

This saving in paper and manpower may loom extremely important as the critical situation deepens. It probably will have a definite influence on any decision of the government having to do with priorities needed to build Trans-Flo cars. Such a decision would further be influenced by the fact that each Trans-Flo car liberates a standard box car—or more than one standard box car—for other uses. From the standpoint of the lessee this type of car makes possible complete supervision over sanitation from the source of supply to the point of usage; the railroad is responsible only for hauling the car.



Left—"Safety cannot be bought with dollars alone. . . . Of overwhelming importance is the safe man."—Col. Clark Hungerford, president, St. Louis-San Francisco. Right—"Let's Pretend"—A sobering and inspiring experience

Safety—An Eternal Vigil

Railroad Section delegates to annual Safety Congress delve into human causes of accidents — and human effects

SOME OF THE EXHIBITORS—NATIONAL SAFETY CONGRESS

- American Chain & Cable Co.—Cranes, hoists, steel castings, etc.
- American Optical Company—Head, eye and respiratory safety devices
- A. B. Chance Company—Line construction and maintenance equipment
- Chicago Eye Shield Company—Head and eye protection equipment
- C-O-Two Fire Equipment Company—Fire extinguishers, smoke detectors
- Diversey Corporation—Safety, maintenance and sanitation chemicals
- Fennell System, Inc.—Floor maintenance machines
- Hy-Test Div., International Shoe Company—Safety shoes
- Industrial Gloves Company—Protective gloves, leggings, hand guards, etc.
- Justrite Manufacturing Company—Lanterns, fire extinguishers and safety cans
- James R. Kearney Corporation—Linemen's tools
- Walter Kidde & Co.—Fire protection and extinguishing equipment
- Lehigh Safety Shoe Company—Safety shoes and rubber boots
- Magnaflux Corporation—Metals maintenance and safety inspection
- Minnesota Mining & Manufacturing Co.—Reflective material and non-slip surfacing
- Safety First Shoe Company—Steel toe footwear
- G. H. Tennant Company—Industrial floor machines, sweepers and floor maintenance supplies
- West Disinfecting Company—Disinfectants, deodorants, etc.
- Willson Products, Inc.—Industrial goggles, gas masks, respirators and allied devices

"Down through the centuries, the carriage of persons and property, from point to point, under varying conditions, has always entailed a degree of hazard. . . . Since the beginning of transportation by rail, relative safety, efficiency and dependability have been its inseparable characteristics—and principal selling points. In the fabric of the railway network, these are qualities that are interwoven and interdependent. Anything that impairs one, works to the disadvantage of the others. Thus the unsafe is not efficient; the inefficient not dependable."

Thus did Col. Clark Hungerford, president of the St. Louis-San Francisco, attest the importance of railroad safety work before the Railroad Section of the National Safety Council, which met in Chicago on October 17, 18 and 19 in connection with the council's 38th National Safety Congress and Exposition.

Although the millions spent for modern equipment and facilities have proved their worth, Col. Hungerford continued, "it would be an unjustified conclusion to presume that safety can be bought with dollars alone—or that accidents can be prevented solely by introducing the latest in mechanical devices. *Of overwhelming importance is the safe man.* A rigid enforcement of rules, periodic examination of workers, a continuing campaign of accident investigation and employee education, are still the requisites of safe operation.

"Safety is not a responsibility that can be unloaded—even onto the capable shoulders of the safety superintendents. The measurement of safety in railway transportation is nothing more than the sum total of the effort, cooperation and understanding of more than a million people—



Left—Officers for the new year. Left to right—L. E. Hoffman, St. Louis Southwestern, vice-chairman; J. R. Thexton, Delaware, Lackawanna & Western, general chairman; R. C. Sabens, New York, Chicago & St. Louis, secretary. Right—



"There is no excuse for failure to report employee accidents in terms of the spirit and letter of the rules."—H. L. Hanson, general claims attorney, New York Central

from presidents right down through managerial and supervisory levels, to every man and woman in the industry. It was through such a coordinated effort that 1949 became the safest year in the history of railroad transportation."

If 1949 performance prevailed, Col. Hungerford pointed out, a theoretical traveler would have to ride continually a train traveling at an average speed of 60 m.p.h. for more than 25 centuries before the law of averages would condemn him to a fatal accident. Similarly, he said, a railroad employee would have to work 40 hours each week for more than 35 centuries before he would be overtaken by the average chance of a fatal accident while on duty.

That, he said, is the railroad tradition in safety, and it lies behind. Ahead is the challenge not only to maintain, but to better, that performance. "It is not the sort of challenge that appeals to the skeptic."

A Sobering Experience

An entirely new approach to a safety problem was experienced by the delegates as they participated in a dramatic presentation, "Let's Pretend," conceived and developed by E. F. Chittenden and G. A. Zang of Toledo, Ohio. Possibly America's first "subjective" safety program, this unusual presentation utilized Mr. Zang's theatrical background and Mr. Chittenden's safety experience to bring to each participant personal consciousness of an accident's toll.

Presented by the Wine Railway Appliance Company, "Let's Pretend" took each person present into the world of a man struck blind as the result of failure to protect his eyes. Upon direction of the narrator, each of the delegates donned a blackout face mask, and as an added measure, the lights of the Morrison Hotel's Mural ballroom were turned out. From special envelopes the delegates, who were seated around large tables, took out a strange assortment of simple things—a toothbrush, some tooth powder, two shoelaces, a cigarette and a book of matches and some bits of cloth. As the narrator described his life without sight, he asked the delegates to accompany him in the performance of such simple, everyday tasks as

lighting a cigarette, putting powder on a toothbrush, identifying different suits of clothing and pairs of shoes. "Books, magazines, movies and sports are out," he said. "For amusement there is only the radio and the reading of Braille." As he described the Braille alphabet, the delegates attempted to follow a sample of writing which was included in the kit.

After the hour-long presentation was over, everyone, even the reporters who had photographed the event, held the gift of sight, and safety efforts to protect it, in a new regard. It was several minutes before the tense air in the convention hall could subside.

Accident Reporting Needs Uniformity

There is a crying need for uniform standards in reporting employee accidents to the Interstate Commerce Commission, said General Claims Attorney H. L. Hanson of the New York Central. Lashing out at safety records that are merely "paper" records, Mr. Hanson said, "A safety record that cannot stand the test of scrutiny is of no value whatever. We stand convicted before the public and the I.C.C. because we lack a uniform reporting practice. There is no excuse for failure to report employee accidents in terms of the spirit and the letter of the rules."

The terms "sufficient to incapacitate" and "perform ordinary duties" are widely interpreted on various railroads, he said. "Because some safety agents are apt to be primarily interested in their safety record, I do not believe they should be charged with making employee accident reports to the I.C.C." As examining surgeons make their reports to the personal injury claims department, and because that department has no "reputation" at stake, Mr. Hanson concluded that the head of that department is best qualified to make these reports. "If all railroads reported their accident cases through this department, it would represent a great step toward unifying the reports and giving them an honest meaning."

A veteran of 40 years of safety work and a pioneer member of the Railroad Section of the N.S.C., Thomas H. Carrow, superintendent of safety of the Pennsylvania, was presented with a wristwatch, a billfold and a testimonial



For his 40 years of safety work, the National Safety Council and the Railroad Section presented Thomas H. Carrow (center), superintendent of safety of the Pennsylvania, with this special Award of Merit. Retiring Section Chairman R. P. Hamilton (right), superintendent of safety for the St. Louis-San Francisco, presents the award as Mrs. Carrow looks on.

scroll, as the section paid tribute to his many years of devotion to the cause of safety. For his final talk before the section, Mr. Carrow pointed to accident statistics and their continuing challenge. "Erroneous accident figures in isolated instances, such as the failure occasionally to report 'strains and sprains' or failure to report any other injury because a man was kept on the payroll, although unable actually to do all of his work, do not vitiate accident statistics as a whole. There is no faking on major injuries or death," he said.

"It is reasonable to assume," said Mr. Carrow, speaking of passenger fatalities, "that acts of omission or commission on the part of locomotive engineers in which signals are involved that result in collisions, or other train accidents, arise, as a rule, not from forgetfulness or absentmindedness, but from previous conscious failures to control the movement of trains strictly in accordance with signal indications. It seems wholly improbable that an engineer would exceed speeds prescribed by signal indications or fail to stop when required to do so, unless he had been in the habit of indulging in such failures on occasions without being taken to task for doing so. The same is true of train crews with respect to providing protection, and to maintenance of way and maintenance of equipment employees with respect to inspection and maintenance or other duties that involve the safety of trains.

"The challenge, therefore, to superintendents, road foremen of engines, trainmasters, division engineers, master mechanics and other supervisory employees, is to discover those who are indulging in failures of any kind that statistics show have resulted in accidents and correct them before they have accidents. Of equal importance is finding out for sure the ones who are thoroughly performing their duties in accordance with the rules, and encouraging them to continue their good performance. On-time performance is one of the most important things to strive for on the railroad, but an absolutely safe performance takes precedence over everything."

The Korean war has taken a large group of railroad

men from the service, both through volunteer enlistments and the draft, said John Edwards, Jr., general manager of the Baltimore & Ohio's Central region. "It is up to the veteran railroaders to plant the seeds of safety in the new men who have taken the place of those claimed by military service."

The Diesel locomotive calls for a new appreciation of speed and power, he continued. Because of its relatively silent operation, a fast-moving Diesel locomotive can approach one without much warning. Another hazard—one which can be greatly reduced through proper education—is the thoughtless motorist at highway grade crossings. Mr. Edwards told of a study undertaken by the state of Pennsylvania in which it was found that drivers who were properly trained as a part of their high school course were involved in far fewer accidents than were an equal number of ordinary drivers who simply "learned how to drive." "As the trained, thinking driver can reduce highway accidents, so can the trained, thinking railroad employee reduce accidents in our industry. It is important that new employees first be selected carefully. Then, they must at once be impressed with the importance of safety." Mr. Edwards suggested that much help along this line could be obtained from railroad labor organizations.

More than 30 other sections of the N.S.C. were meeting in Chicago hotels simultaneously with the Railroad Section. The various industrial, agricultural and educational groups in those sections found much of common interest in the "double header" exposition of safety products which the council arranged in the Stevens and Congress Hotels.

On display were the latest developments, as well as standard equipment, for all phases of accident prevention, industrial health and hygiene. In addition, the council itself set up a large display covering its technical publications and training aids, including special exhibits by its Industrial Conference and Traffic & Transportation Conference. The council also maintained daily showings of safety films, at which a staff member arranged projection of material selected by visitors.



Photo courtesy of Toledo Blade

This aerial view of the Central Union Terminal at Toledo, Ohio, was taken shortly before it was fully completed and before a small portion of the old station had been removed. Passengers enter from the high ground of the plaza at the left, cross over the traffic of Emerald avenue on the approach

bridge, and arrive in a spacious ticket lobby on the third-floor level of the building. To board their trains, passengers pass over the tracks on the large concourse and reach the covered platforms by means of ramps and stairways. The new two-story mail service station is at the lower right

Toledo's New Central Union Terminal

N.Y.C. passenger station is functional in plan, yet decoratively in appropriate harmony with the "glass center of the world"

Built at a cost in excess of \$5 million, the Central Union Terminal which was recently placed in service by the New York Central at Toledo, Ohio, reflects the functional trend in transportation facilities by its arrangement of associated units into an integrated whole for the swift and reliable handling of trains and the convenience of travelers. Its design gives first consideration to the needs and comfort of the passengers using the new station and to safe and efficient progress through it from the time they enter from the high ground of the plaza approach on the north until they board trains from covered platforms on the south. Conversely, quick access to the city is provided for incoming travelers.

In addition, the new structure affords maximum convenience in handling baggage; it provides offices for the railroad's division employees as well as overnight living and dormitory quarters for trainmen while they are away from home; and it provides adequate space for the stationmaster and his staff and for the equipment neces-

sary for the operation of a passenger terminal and for servicing trains.

In addition to the new passenger station, the overall passenger terminal project embodies several related facilities which are spread over an area of about 25 acres. This includes city-owned property on which an extensive plaza, complete with paved street approaches, bus and taxi-cab routes, sidewalks and paved parking areas, was built by the city of Toledo at a cost of approximately \$200,000.

Adjuncts to the station building itself are a shelter entrance; a covered causeway or approach bridge, 24 ft. wide by 101 ft. long, over a thoroughfare known as Emerald avenue; and a concourse, 44 ft. wide by 195 ft. long, serving five long low-level passenger platforms with nine through tracks by means of stairways and ramps, and one short platform with three stub tracks. Other buildings involved in this project are a two-story mail service station, a car-facility building, a communica-



The decorative value of the large amount of glass block in the outer walls of the station is emphasized when the lights are on at night



Structural glass, plate glass and glass block were used liberally in the interior to point up the importance of Toledo as "the glass center of the world," and a sand-blasted mural, in 12 different colors, was installed on the side of the balcony over the entrance from the causeway



An open-type ticket counter, 50 ft. long and having stations for seven clerks, projects from beneath the balcony on one side of the ticket lobby. The "backstage" area contains rooms for reservations, a cashier, ticket agent and his staff



The concourse is a direct extension of the approach causeway and ticket lobby. It is furnished with 56 divans with colorful upholstery to augment the seating space in the waiting room. Passengers can check arrival and departure time of trains on the bulletin board shown on the right, and through large Thermopane picture windows over the tracks they can see the trains as they pull into the terminal

tion service building, a building for housing switchboard and transformer equipment, and several other smaller buildings for platform services, switch tenders, and the storage of combustibles.

Perhaps the two most striking impressions given to a traveler using this new station are the introduction of a vast amount of daylight into the interior and a quietness that is seldom sensed in so large a terminal. These effects are brought about by the lavish use of glass and color and the extensive use of insulating materials. Glass was purposely used in generous quantities not only because many colorful effects can be obtained with this material and because it is easy to maintain and to keep clean, but also to accentuate Toledo's position as "the glass center of the world." In fact, four of the leading glass producing firms of Toledo—Libby-Owens-Ford Glass Company, Owens-Corning Fiberglas Corporation, Owens-Illinois Glass Company, and Glass Fibers, Inc.—collaborated in the installation of a sand-blasted glass mural of 12 different colors that was mounted on one side of a balcony wall that surrounds the ticket lobby.

Although the Central Union Terminal was built and is owned by the N.Y.C., it is used by the passenger trains of three other roads, viz., the Baltimore & Ohio, the Chesapeake & Ohio, and the Wabash. The new station was built on the site of the old one which was constructed in 1886. The construction of the new station necessitated the erection of a two-story temporary addition to house a waiting room and administrative offices to permit a section of the old structure to be demolished to make room for the new. Construction of the new concourse and station platforms, together with the relocation of the trackage, was further complicated by the requirement that no more than two through tracks could be taken out of service at any one time—a proviso that was stipulated in order not to interfere with the running time of the 55

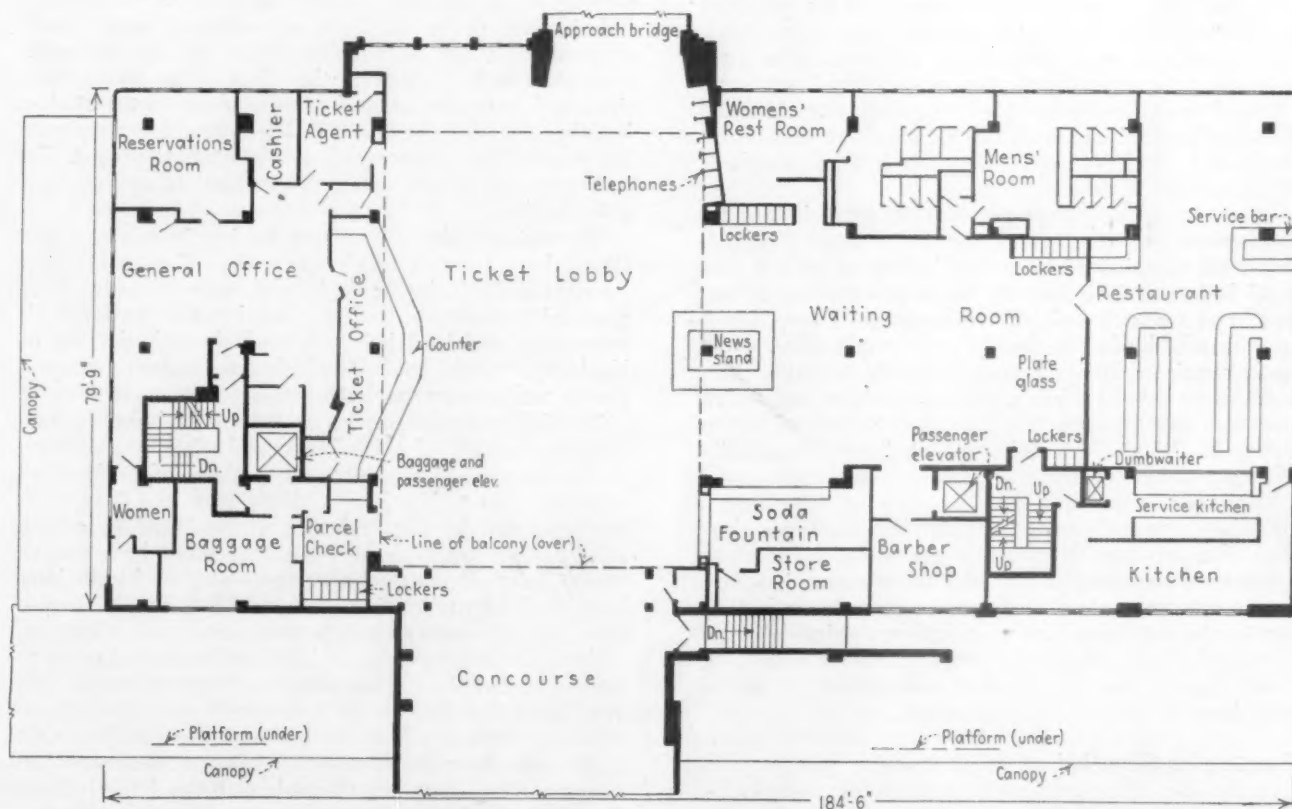
passenger trains that arrive and depart daily from this station.

In contrast to the old depot, which was of the track-level type and reached from the city only after a tortuous trip through congested streets, the new station, approximately 80 ft. by 185 ft. in plan, is a four-story structure with basement, and is entered by passengers at the third-floor level from the new plaza. The building has a steel skeleton with reinforced-concrete foundations supported on wood piles and concrete-filled Monotube metal piles. In general, the exterior walls are of face brick and glass block with aluminum trim, and the interior partitions are of cement-tile block finished in plaster, terra cotta glazed tile, and structural glass. Floor construction consists, depending on the location, of flat concrete-slab arches surfaced with terrazzo, asphalt and rubber tile, and cement, quarry and ceramic tile, except in the large baggage room area on the first floor and on the unloading docks, where Kreolite creosoted woodblock flooring was used.

In the basement area are the various rooms for the utilities of the station, such as power, light, heat, sewers and telephones. This level also contains rooms for the police-department arsenal and stores, superintendent's office-file storage, stationmaster's supplies and storage, ticket-office storage and supplies, restaurant stores, men's and women's locker and wash rooms for the restaurant employees, and a baggagemen's locker and wash room.

A number of the basement corridors are utilized as raceways for warm air and ventilating ducts as well as for carrying steam pipes to radiators and unit heaters on upper floors. Steam for heating, cleaning and working is piped from a boiler house situated on the easterly edge of the station area, and is delivered in underground lines protected against heat loss by Kaylo and Fiberglas insulation.

The first or ground-floor level is primarily devoted to



Plan of the third-floor level of the new terminal, which contains the facilities for serving passengers



The central area of the waiting room is given over to 16 lounge-type divans, and around its U-shaped periphery are located a soda fountain, a barber shop, a restaurant and coffee shop, and rest rooms. Stainless steel was used on the lower portion of the columns for easy cleaning

baggage and railroad operating offices. In addition to a large baggage-storage area, which occupies about 35 per cent of the space, it contains offices for the baggage agent and his staff, the police agent and his staff, a ticket receiver who accepts cash from the train conductors, a trainmaster, dining car and Pullman representatives, the stationmaster, and a train-crew dispatcher. Other facilities on this floor are an employee's cafeteria, a telephone switchboard and equipment, a railroad mail room, a red-cap rest room, a wheel-chair storage room, an oil and lamp room, a tractor repair and storage room, and separate toilet and locker rooms for these various department units.

Two large steel overhead rolling doors facilitate the movement of baggage from the baggage room to the train platforms, and four grade crossings are provided over the tracks for the tractors hauling baggage and mail. The baggage room is also served by an outside truck dock which is of saw-tooth design to obtain maximum tailboard space. Small electric and gasoline tractors and hand trucks haul the baggage between the train platforms and the baggage room through other overhead rolling doors.

The entire second floor provides accommodations for train crews and is operated by the railroad Y.M.C.A. This level contains 35 "outside" bedrooms with a total of 45 beds, not including 18 bunks provided in a "lay-over" rest room. A stairway from the track level terminates in a lobby beside the "Y" secretary's office, and a neatly appointed lounge is placed directly opposite. Other facilities on this level are a recreation room and several wash and locker rooms. The lounge room and recreation area is furnished with comfortable chairs, tables, a radio, a library and refreshment dispensing machines.

The outer walls of the bedrooms are of masonry and glass block, with the wall of each room having a clear-glass Vampco ventilator, while the other walls are of unplastered cement tile. This wall construction is said to reduce external noises while providing privacy with no sacrifice of daylight. The bedrooms are painted in restful pastel shades chosen for solar exposure. The toilet rooms on this floor are finished with glazed tan tile for easy housekeeping and maintenance.

Passengers Handled at High Level

The public areas on the third floor of the station are designed for the maximum convenience of the passenger.

He approaches the station from the plaza on this level, passes over the traffic hazards of Emerald avenue on the causeway, makes his way through the station with no cross interference from associated station services, and, by means of a concourse, stairs, ramps and covered passenger platforms, goes directly to his train regardless of how many other trains may be in the station at the same time.

The passenger arriving by automobile alights at a canopied entrance, approximately 20 ft. wide by 100 ft. long, having two winged walls with large glass-block panels to lend importance to the portal and to create a definite affinity with the causeway and main building beyond it. Six doors of tempered Tuf-flex glass open onto the causeway, which is of steel and reinforced concrete with an aluminum-surfaced composition roof. Ample daylight is given to the interior of the causeway by 12 panels of Insulux glass block, which are inset with out-swinging clear-glass sash. This gives the effect of an almost continuous fenestration strip from the plaza to the station building. Another set of six Tuf-flex glass doors separate the end of the causeway from the station proper. On passing through these doors, the traveler emerges into the ticket lobby.

The ticket lobby, rising two stories, is spacious and ringed by a balcony which serves the offices on the top floor. It is 52 ft. by 80 ft. in plan and the entire floor area, of terrazzo, is unobstructed by any vertical columns, the roof load being reduced through the use of Kaylo lightweight roof tile which has insulating properties as well as structural strength.

The lobby receives a maximum of daylight through generous panels of glass block and clear glass which extend from the basement level to the roof to form an imposing facade. The panels, 43 ft. high and 8 ft. wide, are separated by slim columns of steel and limestone, reinforced at intervals by horizontal tie rods to relieve stress. To minimize glare, two types of glass blocks have been used. Light-directing block, which utilizes prisms to turn daylight ceilingward, is used above eye level, and a daylight-diffusing type is installed from that point to the sill. In addition, most panels are equipped with sash ventilators at ceiling height to drain off hot and stale air.

Occupying one side of the lobby on the traveler's right as he enters from the causeway is a radial open-type ticket counter, 50 ft. long, which projects beyond the balcony line into the lobby. This counter has a Formica top, stainless steel trim and its front is faced with cadet-blue

Glastone. It has places for seven ticket sellers, each of whom possesses the only key that will open his own cash drawer. Immediately behind the counter and under the balcony is an illuminated ticket rack. Further to the rear and out of sight of the lobby are offices for the city ticket agent and his staff. At one side of the ticket counter, in an alcove available to the public, is a bank of parcel checking lockers. Other banks of these lockers are placed at strategic locations throughout this floor of the station and are recessed into the walls.

Waiting-Room Facilities

On the opposite side of the lobby is the entrance to the general waiting room, which is flanked by a six-booth telephone pay station on one side and a soda fountain on the other. The telephone booths are of a new open-type design, without doors, but with the side panels of each compartment equipped with special Fiberglas insulation to deaden outside noises. This type booth permits passengers to slide their luggage in ahead of them while calling and reduces the possibility of anyone stumbling over baggage. A number of conventional closed-in type telephone booths have been placed at other busy points in the station.

Placed around the U-shaped periphery of the waiting room, which is 35 ft. by 58 ft. in size, are a barber shop, public rest rooms, a restaurant and coffee shop, parcel-checking lockers, and the soda fountain previously mentioned. A newsstand is centrally located near the lobby end of the waiting room. The center of this room is given over to 16 lounge-type divans seating 32 persons. These comfortable divans, upholstered in red, yellow and green Tolex, which is a plastic imitation leather, are in bold contrast to the subdued color tones used on the walls and ceilings.

The restaurant and coffee shop is at the rear of the waiting room and separated from it by large plate-glass panels. This restaurant is about 30 ft. by 56 ft. in size. The counter section has 46 Tolex-covered stools; the dining room section has tables to accommodate 50 persons. Both tables and counters have Formica tops. A service kitchen, with Monel metal, stainless steel and aluminum equipment, occupies the south end of the restaurant, and behind it is a kitchen workshop with a full complement of modern appliances for quick service. A dumbwaiter shaft, accessible to either kitchen, extends downward through all floors to the restaurant store room in the basement.

The concourse is actually a direct extension of the approach causeway and ticket lobby. Its walls are of gray terra cotta tile and the fenestration strip on each side consists of large Thermopane picture windows flanked by panels of glass block. The ceiling is of Fiberglas acoustical tile and the floor is of terrazzo with Venetian red being used along traffic aisles and a lighter tone in seating areas. Aluminum and stainless steel have been used for trim around the gates to stairways and ramps. The concourse is furnished with 56 divans having colorful upholstery.

From the concourse, passengers have ready access to three positions on any of the five through-train platforms by means of two stairways and a ramp. Each ramp has a 10 per cent grade and receives maximum daylight through large panels of glass block. The station platforms have monolithic concrete curbs on spread footings and are filled with tamped stone surfaced with black top. The platforms are covered with butterfly canopies.

The fourth floor of the building contains offices for the superintendent, assistant superintendent, chief clerk, superintendent's general office, chief dispatcher, dis-

patcher's car distributor, supervising agent, telegraph office, a large conference room, and toilet rooms. Hung ceilings predominate in this office area. Their outer edges have been sloped upward to direct warm air to a ventilator sash at the top of each window opening. The outer walls on this floor have a continuous fenestration strip of glass block and clear glass ventilating windows. To permit this continuous fenestration the outer walls of this floor, and of the third floor, are supported by cantilever action from the building columns which are set back about 6 ft. from the walls.

Wall finishes on the fourth floor have been chosen for their daylight reflectivity as well as solar exposure; offices with northern exposures are decorated with warm pastel shades, while those in sunny locations are painted in cool blues, greens and yellows. Doors and trim are in contrasting tones and the floors are in colorful asphalt tile. In keeping with the bright decor of the building, the offices were furnished completely with new metal furniture, including executive and standard desks, tables, chairs, and file cabinets.

Acoustical tile has been used on the ceilings of the office area. In the dispatchers' office, where four positions are required, baffle walls, faced with perforated acoustical tile, have been built between each man's position to eliminate outside noises as far as practicable.

Heating and Ventilating

The station's heating and ventilating system offers filtered forced air, with fin-type radiators the source of heat during winter periods. Some departments are provided with semi-air conditioning to permit year-round operation without natural ventilation. Warm-air ducts have been covered with approximately 5,000 sq. ft. of fire-resistant Fiberglas insulation, which not only prevents heat losses but also effectively absorbs heating system noises. Both cold and hot-water lines are also wrapped in insulation composed of glass fibers.

Literally miles of utility lines had to be built and rebuilt. These include lines for water, sewage, gas, electricity, compressed air, and high- and low-pressure steam, all of which were laid in several circuits so that, in the event of the failure of one part of the system, other circuitous lines would maintain service. Also, since the tracks were relaid on wider track centers, the facilities for servicing both steam and Diesel locomotives had to be relocated.

Communication facilities include a public-address system, Teletype, an inter-office system, a pneumatic-tube system, and a coordinated train-starting system for transmittal of information between the concourse and platforms and between the platforms and yard-control points.

Construction work was begun with a spike-pulling ceremony on one of the tracks on October 2, 1947. Work on the project was done under two general contracts, both held by the Duffy Construction Corporation, of New York and Cleveland, general contractors. The new express building, constructed by the Railway Express Agency, was placed in operation on September 8, 1948; the car-service facilities were opened on January 5, 1949; the mail-service building was put in service on June 6, 1949; and the new passenger station was officially dedicated on September 22, 1950, during a week of celebration arranged by a citizens committee of the city of Toledo. (See *Railway Age* of September 30, page 41.)

The project was developed and carried out under the general direction of E. A. Dougherty, chief engineer of the New York Central, Lines West of Buffalo. Preparation of plans and general construction were under general supervision of R. L. Corsbie, architect. W. A. Bogart, resident engineer, had direct charge of construction.



Subsidized Competition

G. H. Howe, far left, who succeeds W. B. Pope as chairman; F. H. Jeffrey, who succeeds Mr. Howe as vice-chairman

Present-day competition calls for a "more realistic" railroad rate structure, while subsidies to competing transport agencies raise a "serious question" as to whether this country will continue to have "self-supporting, tax-paying, free-enterprise, privately operated railroads." These views were expressed, in turn, by A. E. Perlman, general manager of the Denver & Rio Grande Western, and Robert S. Henry, vice-president of the Association of American Railroads, in addresses at the annual meeting of the A.A.R.'s Treasury Division, which was held October 18-20, inclusive, at the Broadmoor Hotel, Colorado Springs, Colo.

Other speakers at the meeting included Jacob Aronson, vice-president and general counsel of the New York Central, who gave an off-the-record talk on the operations of a railroad legal department; I. V. Jessee, comptroller of the Norfolk & Western and chairman of the A.A.R.'s Accounting Division; E. H. Bunnell, A.A.R. vice-president in charge of the Finance, Accounting, Taxation and Valuation Department; and M. Wendell Reuss of McLaughlin, Reuss & Co., New York. Also, there was the chairman's address, delivered by Division Chairman W. B. Pope, treasurer of the Seaboard Air Line, who presided at the meeting.

Howe and Jeffrey Elected

At the election session, G. H. Howe, treasurer of the N.Y.C., was chosen to succeed Mr. Pope in the chairmanship. Mr. Howe had been vice-chairman, and he was succeeded in that position by F. H. Jeffrey, treasurer of the Chicago, Milwaukee, St. Paul & Pacific. E. R. Ford continues as secretary with headquarters, as heretofore, at Washington, D. C.

The meeting was designated as the division's tenth, but it was the thirty-ninth annual meeting of treasury officers, including sessions held by the former Railway Treasury Officers Association. More than 350 members and guests of the division attended, the guests including, as usual, representatives of many banking and financial institutions. H. B. Fink, secretary and treasurer of the Atchison, Topeka & Santa Fe, was chairman of the committee on arrangements. Palm Beach, Fla., was chosen for the next meeting, which will be held in October, 1951.

Mr. Perlman's call for a "more realistic" rate structure was based generally upon his view that the present structure is "one of the weakest spots in the entire railroad picture." When the railroads had a "virtual monopoly" in the handling of land transport, they "could indulge in many practices which they cannot do today," the D. & R. G. W. general manager explained. He went

on to say that many railroad rates on raw materials were made "clearly noncompensatory" with the thought that the "loss" could be made up on high-rated manufactured products.

"Today," Mr. Perlman continued, "the railroads are paying for this kind of rate structure, for the trucks are leaving the low-rated commodities . . . and are concentrating on the heavy, high-rated commodities. The railroads are extremely vulnerable, for a very large portion of the traffic which they carry does not pay its full proportion of the cost of operation, and we have depended upon certain commodities to make up for this loss as well as to take care of the large passenger deficits and deficits from unprofitable branch lines which the dictates of public convenience and necessity force us to operate."

Challenged by Subsidized Competition

To develop a "more realistic rate structure," Mr. Perlman said, a study "should immediately be started to determine the cost of handling various commodities and the rates which should apply, taking into full consideration the competitive factors." He noted that the railroads are now being "challenged on all sides by subsidized, young competitors who are growing in vigor."

Meanwhile, the D. & R. G. W. general manager had given figures on railroad efficiency to refute contentions to the effect that the industry is "decadent." He suggested that railroaders "let the public know our own story, for it is one of which we may well be proud." As an example of the industry's alertness to effect operating economies, he outlined the capital improvement program carried out in recent years by the D. & R. G. W. The program included an \$85,000 investment in off-track equipment which brought a saving of "three quarters of a million dollars annually" in maintenance costs.

In raising his question as to whether subsidized competition will permit continuance of self-supporting, privately operated railroads, Vice-President Henry of the A.A.R. said there isn't any question as to the "physical future" of the railroads. "There is," he added, "nothing in existence and nothing in sight that can begin to do . . . what the railroads do. There is nothing that can produce the service with the economy of manpower, the economy of mechanical power, the economy of fuel, and the economy of money which the railroads employ in producing the great bulk of all the service we need."

Colonel Henry conceded that the question of subsidized competition was not easy to settle. He insisted, however, that "sooner or later" it has got to be settled.

"We have," he continued, "a curious blind spot about transportation and what passes for economic thinking

Poses Rate and Financial Problems

They were pointed up by Perlman and Henry in addresses at annual meeting of treasury officers; G. H. Howe is new chairman of A.R.R. Division

among our people, including some of our economists and including a great many of our business leaders. If socialism comes in the United States, it won't be because of the socialists. There are not enough of them. . . . If socialism ever comes in the United States, it is going to be because of our business men, our local chambers of commerce, our business organizations who feel that, as long as the federal government sloshes gravy around and they stand out with their little tin cups, they will catch a few of the drops. . . .

"Until we get rid of that sort of conduct among the business community . . . until we get rid of that sort of attitude toward government and government expenditures, we are in danger of losing the system which has made possible the miracle of America."

Chairman Jessee of the Accounting Division extended that division's "greetings and best wishes" to the treasury officers. He called attention to the "joint and cooperative efforts" of the two divisions on matters of mutual interest, suggesting that such teamwork enhances the prestige of both organizations.

A.A.R. Vice-President Bunnell gave a brief highlight review of the Treasury Division's accomplishments during the past 10 years. As "typical illustrations" of the accomplishments, he listed the following: (1) Approval of rules governing the uniform collection of freight transportation charges; (2) approval of uniform forms of vouchers, checks and drafts; and (3) the compilation and publication of Recommended Railway Treasury Procedure Respecting Agency Relations, "which embodies under one cover various rules and regulations affecting the treasury department."

Division Ready to Serve

Looking to the future, Mr. Bunnell suggested that the treasury officers make the most of their membership in the division. "Utilize the services of the offices in Washington as well as those of the standing committees," Mr. Bunnell continued. "If you have any problems or if you have any ideas for the possible betterment of the treasurer's function, submit them for consideration by the appropriate standing committee."

Mr. Reuss' talk was a statistical presentation designed, as he put it, "to combat the belief" that the railroad industry is "decadent". His figures compared 1949 with 1929 on the basis of such measures as non-equipment fixed debt, fixed charges, working capital, wage costs, and depreciation reserves. Mr. Reuss did not claim that all railroad problems had been solved, but he found in his figures a showing that the industry "is really far from being unsound or unhealthy."

In his "chairman's address," Mr. Pope stressed two

points—the value of personal contacts with agents, and the desirability of giving continuing attention to the temporary investment of surplus cash. "A million dollars invested in short-term governments is now worth at least \$13,000 per annum before taxes," Mr. Pope said.

The chairman also paid tribute to Mr. Bunnell and his staff, especially Division Secretary Ford. The division, Mr. Pope said, was "just plain lucky in having a secretary with the ability, the energy, the foresight and patience of Ed Ford."

During intervals between the addresses, the treasury officers disposed of a business docket which included reports of the division's standing committees and sectional groups. Following the usual procedure for disposing of this docket, Secretary Ford summarized the detailed report of the Advisory Committee. Where reference was made in that report to subjects which committees desired to discuss, the presentation of the report was interrupted for such discussion and any resultant action.

Canadian Exchange

There was considerable discussion of the effect of Canadian exchange regulations on settlements between United States and Canadian railroads. William Hobgen of the Canadian Foreign Exchange Control Board, a guest at the meeting, discussed the matter briefly and answered several questions about it. The discussion and questions pointed up the fact that procedures for obtaining authority to transfer U. S. dollars from Canada are pretty much the same as they were before the Canadian government freed Canada's dollar from fixed rates of exchange. Because of the latter action, however, the conversion rate will depend upon the situation in the foreign exchange market at the time of the transfer. The division voted to make no change in present recommended practice with respect to the handling of drafts for interline balances with Canadian lines.

Another matter receiving considerable attention was the new form of the open-end bond of indemnity that is provided for under Rule 7 of the Consolidated Freight Classification. By Circular No. TD-120, dated September 12, this form was promulgated to members as a recommended form of the division.

Also, the division heard from its former chairman, J. M. Salter, treasurer of the Kansas City Southern, an appeal for railroad cooperation in the nationwide drive to increase employee purchases of savings bonds under payroll deduction plans. Mr. Salter appeared in his role of Missouri state chairman for the drive which is being conducted by the Treasury. In making his appeal, he used as a text the editorial entitled "This War Is Different," which appeared in the *Railway Age* of September 16.

GENERAL NEWS

Freight Car Program Established by N. P. A.

**Will provide steel needed
in first quarter of 1951**

The National Production Authority on October 26 established a program to provide steel products in sufficient quantities during the first quarter of 1951 to build new freight cars at the rate of 10,000 a month, as well as for "adequate" repair and maintenance of the present fleet. The program, established by Supplement No. 1 to N.P.A. Order M-1, will provide approximately 310,000 tons of steel products per month to car builders and railroad repair shops during the first three months of next year.

A minimum program on the foregoing basis had been sought by the Defense Transport Administration, and that agency issued an October 27 statement to say it was "gratified" at the "speedy" action taken by Administrator William H. Harrison of N.P.A. The D.T.A. added, however, that such action was "only the first step in the right direction," and that "for some time to come, the rail transportation situation will remain acute."

N.P.A.'s approval of the program came after discussions with D.T.A., other government agencies, and representatives of the steel, railroad, and car building industries. (See *Railway Age* of October 21, page 35.) The established procedure calls for issuance by N.P.A. of individual directives to steel producers to accept certified orders for production and delivery of steel for construction and repair of freight cars. These directives will specify the tonnage of each steel product to be shipped in the months designated.

Specified Amounts

Contract builders, railroad shops, and manufacturers of component parts will place the certified orders with steel producers. Such orders, however, must not call for amounts of steel in excess of that actually required to complete new-car contracts and repair schedules which were firm before the orders were placed with steel producers. The certification to the latter will read as follows: "Certified that the material called for in this order is to be used only in connection with the Freight Car Program under N.P.A. Supplement 1, Order M-1."

Producers of steel are not required to accept certified orders under the

program which are received less than 45 days prior to the first day of the month in which shipment is requested, unless specifically requested to accept such orders by N.P.A. When steel production has been scheduled pursuant to directives issued under the program, these schedules must be maintained unless N.P.A. directs otherwise.

There are also provisions for assistance to those who are unable to place certified orders. They stipulate that such situations should be reported to N.P.A.'s Iron and Steel Division, the reports "specifying the producers who refuse to accept this order." There is also another provision stipulating that nothing in the order shall prevent railroads, private car companies or common carriers "from making their own repairs or construction of freight cars."

Situation "Will Remain Acute"

In support of its prediction that the railroad situation "will remain acute," the D.T.A. cited recent car-shortage figures. It said again, as it had in its presentation to N.P.A., that "the total requirement up to June 30, 1952, is for 227,400 new cars." The statement continued:

"All railroads and users of freight cars consequently are urged to take every possible step to make the most efficient use of the freight car fleet. Cars should be loaded and unloaded as promptly as possible. Regulations intended to insure the most effective use of freight cars should be scrupulously observed and the D.T.A. asks the full cooperation of the railroads, shippers, and others concerned, so that our freight car fleet can make its maximum contribution to the defense program and to the maintenance of the civilian economy."

"D.T.A. not only is gratified at the celerity with which the N.P.A. acted upon recommendations for a freight car program, . . . but it feels also that the manner in which the program was established is designed to simplify otherwise complicated procedural routine so as to interfere to the least possible extent with the normal operations of steel producers, car builders, railroads, and others. With this fact in mind, D.T.A. urges car builders and railroads to inform themselves thoroughly about the program, and to scrupulously observe the inventory regulations and the requirements that certification for steel under the program be only on the basis of firm orders. By such full cooperation a program of greater complexity can be avoided."

The statement concluded with assurances that D.T.A. is "well aware of the fact that freight cars are only one element in the transportation picture." Thus consideration is being given to the need for other programs, "including studies of the needs of the

highway system, inland waterways, Great Lakes shipping, local transit facilities, and warehousing and storage facilities, in relation to the over-all picture."

B. of L. E. to Seek 20 Per Cent Wage Raise

The Brotherhood of Locomotive Engineers announced last week that it would launch a new wage case involving a demand for a 20 per cent increase for its members in road service. This brought into the new wage movement the last important union representing railroad employees.

Plans to demand increases of 35 cents per hour had previously been announced by three other unions representing operating employees—Brotherhood of Locomotive Firemen & Enginemen, Brotherhood of Railroad Trainmen, and Order of Railway Conductors. And the 15 so-called cooperating unions representing non-operating employees have served notices of demands for a raise of 25 cents per hour.

Outside the group are three other "non-op" unions which have also served 25-cent demands. They are the United Transport Service Employees; the United Railroad Workers of America; and the National Council, Railway Patrolmen's Unions.

The new demands of the operating unions will be in addition to those involved in unsettled previous cases. The latter are the yardmen's 40-hr.-week case of the B.R.T. and O.R.C., whose strike threat caused President Truman to seize the railroads for operation by the secretary of the army; the like case of the B. of L. F. & E.; and the B. of L. E. demands for a 20 per cent increase in the basic rates of its members in yard service, assignment guarantees, and allowances to its members in road service for expenses at away-from-home terminals.

Won't Let L. & N. Drop Automatic Train Control

Division 3 of the Interstate Commerce Commission has denied a Louisville & Nashville petition for authority to discontinue the automatic train control installation on its 162-mi. line between Corbin, Ky., and Etowah, Tenn.

The adverse report, by Commissioner Patterson, said discontinuance of the train control system on the line, "would substantially reduce the safety of train operation." The L. & N. had asked to discontinue the system because foreign current of the same frequency as used for the train control system feeds into

and out of the rails resulting in many false restrictive indications of the cab signals. The foreign current is stray leakage current from high voltage lines of the Rural Electric Cooperative Associations which parallel and cross the L. & N.'s tracks.

Division 3 referred to the use of automatic cab signal systems on electrified railroads, and noted that in such cases the cab signals are operated by coded energy in the rails which is a different frequency from that used to move the trains. The division then suggested that the L. & N. in this case could operate its train control system by using current of a different frequency than that of the stray leakage.

New Mail-Handling Plan

A compromise agreement for the handling of mail on the railroads is embodied in a "comprehensive plan" which has been filed with the Interstate Commerce Commission by Postmaster General Donaldson. The plan is part of the move to settle the long-pending Railway Mail Pay case (No. 9200), and was worked out between the railroads and the post office.

The plan was filed to become effective January 1, 1951. It does not include proposed rates to be applied to the various services performed in handling mail, but, according to the document, such proposed rates will be submitted soon. As reported in *Railway Age* of September 30, page 42, the I.C.C. has set November 8 as the date for the next hearing in the mail pay case. At that time the railroads and the post office will submit their compromise proposals for settling the retroactive phase of the case.

Among other things, the new "comprehensive plan" submitted to the I.C.C. omits that feature of previous arrangements under which the postal department paid for the return of empty cars. Exclusion of this provision had been agreed upon earlier by the carriers and the department.

A statement by the Postmaster General in connection with the new plan said it was being filed with the I.C.C. to enable the commission "to fix fair and reasonable rates for the transportation of mail in accordance with the service prescribed."

Would Apply Export Rates To Rail-Air Shipments

Examiner S. R. Diamondson has advised the Interstate Commerce Commission to find that shipments which moved by rail to Tampa, Fla., and were exported from there by airplane, were entitled to rail export rates to the port on the same basis as those accorded shipments exported by water carrier. In the same proposed report (in No. 30255), Mr. Diamondson has also recommended that the commission condemn as not just and reasonable a proposal of the Florida East Coast to re-



THE FIRST OF 30 new 75-ft. baggage express cars being built by the Chicago, Burlington & Quincy's Havelock (Neb.) shops. Of all welded construction, the cars feature an enclosed wash and toilet room, a clothing locker and improved illumination. They are equipped with tight-lock couplers, rubber draft gear

and high-speed roller-bearing trucks. There are 6-ft. and 8-ft. doors on both sides. Ten of the new cars are to be painted to simulate stainless steel and will be assigned to "Zephyr" trains. The order represents the first passenger equipment ever constructed at the Havelock shops

strict rules governing the application of export or import rates to and from Florida ports to export or import traffic moving from or to such ports by ocean vessel.

The railroads had applied domestic rates to Tampa to the rail-air shipments involved. In recommending a commission finding that the shipments were entitled to the lower export rates, the examiner also proposed an award of reparations.

"The record shows," he said, "that freight traffic moving between the United States and abroad by air is growing in diversification and volume. What the future holds no one can say with definite assurance but it is not mere speculation to conceive that such transportation, at present in its infancy, may become an essential part of the transportation system if encouraged to develop under a reasonably competitive rate relation with other means of transportation. It is apparent, however, that without a parity in the rail rates to Tampa, rail-air traffic would not have a fair opportunity to move in competition with rail-water traffic to foreign destinations."

Sees Continuing Demand For Freight Cars In 1950

There are good indications of a continuing heavy demand for freight cars during the remainder of 1950, according to Arthur H. Gass, chairman of the Car Service Division, Association of American Railroads, in his latest review of the "National Transportation Situation."

Making his usual survey of transportation, Mr. Gass discussed the overall car situation, noting the recent peak loadings and car shortages. He said efforts to get grain moved off the ground before winter, a record-breaking sugar beet crop, heavy coal and ore loadings, and high industrial production to meet defense needs were factors

Traffic Chiefs Considering Freight Hike Plea?

Chief traffic officers of railroads from all freight territories met in Chicago on November 1 and 2. As this issue went to press no official announcement had been made of the subject under discussion or action taken, but it is believed serious consideration was given to the possibility of an immediate request for a nationwide freight rate increase. It is understood the individual railroads are by no means unanimous in their views whether an increase would lose more revenue by reason of diversion to competitors that it would gain. One officer told *Railway Age* that his road would oppose any freight increase at this time, notwithstanding the fact that current demands of the brotherhoods will undoubtedly raise unit costs.

that would help keep car demand high in the next several weeks.

"Grain on the ground alongside railroad rights-of-way and elevators blocked due to car shortages continue to be greater this year than in recent years at the same period," Mr. Gass said in discussing the box car situation. As of October 11, there were 811 such blocked elevators and 3,699,000 bushels of grain on the ground, he said. He added that every effort is being made to assist the car supply of northwestern roads so they may move this grain to covered positions before winter.

As to demand for open top cars, Mr. Gass said coal and steel movements "will doubtless continue at present high levels for the next several weeks." He said also that roads furnishing hoppers and gondola dump cars for the sugar beet harvest are having a "most difficult time" in rounding up sufficient equipment. But he noted that cold weather will soon force suspension of the lake ore and coal movements and a substantial reduction in movement of building and construction materials.

There has been some improvement

in the lake ore situation recently, Mr. Gass said. The all-rail movement from Minnesota to the Pittsburgh-Youngstown-Chicago areas has resulted in delivery of about one million tons. According to Mr. Gass, the steel industry anticipates a deficit of 2 or 3 million tons of ore when the lake season closes, and it is likely that the all-rail movement will continue throughout the winter.

Discussing movement of coal, the C.S.D. chairman said 1950 coal loadings up to October 7 were about 11 per cent above those for the same period in 1949. He said the lake coal program is making "satisfactory progress," with 81 per cent completion as of October 9. He added that there are "some indications" that export movements of coal overseas will be increased in the near future.

Mr. Gass also said there had been an improvement in the bad order car situation since his last report. The number of cars held for repairs October 1 was nearly 6,300 below the number on September 1, and down more than 23,000 compared to October 1 a year ago. There were 107,398 cars held for repairs on October 1 this year.

The average turn-around time of freight cars in September, as reported by Mr. Gass, was 13.8 days. The comparable figure for September, 1949, was 17.19 days. On the basis of reports from 579 cities and towns in 10 shipper board districts, cars detained beyond free time of 48 hours averaged 21.74 per cent of those placed in September. This compared with 21.65 per cent in August and 18.78 per cent in September, 1949.

Hearing on Parcel Post Rates Now Set for Dec. 5

The Interstate Commerce Commission has canceled the hearing scheduled for November 14 in the case in which the Postmaster General is seeking the commission's consent to raise rates on fourth-class mail. The hearing has been rescheduled for December 5, and will be held in Washington, D. C., before Commissioner Mitchell and Examiner Rice. (See *Railway Age* of October 21, page 41).

Say "Excess Profits" Come Only After Fair Return

Excess profits taxes should be paid by the regulated railroads only upon earnings that exceed a return of six per cent on their invested capital, after payment of normal and surtax income taxes, the Association of American Railroads said in a memorandum filed by J. Carter Fort, A.A.R. vice-president and general counsel, in response to inquiries from the staffs of the Joint Committee of the House and Senate on Internal Revenue Taxation, the Treasury Department and the Bureau of Internal Revenue.

Arguing that regulated industries



"Can you tell me where to go?"

—From "Railroad Humor" compiled by the St. Louis Southwestern

such as railroads require special consideration in framing excess profits tax legislation, the A.A.R. said that such industries could not "in any realistic sense be deemed to have earned 'excess profits' so long as they have failed to realize a reasonable return upon their invested capital, after taxes upon the full amount of their normal and surtax net income."

The position was taken that an excess profits tax law should provide, in the alternative, for an invested capital base and an average earnings base for the calculation of a normal return. The invested capital base should include 100 per cent of borrowed capital. Earnings during a base period should not be reduced by any arbitrary percentage, but should be recognized in full, the railroads contended.

Effect of Taxes

"It should be emphasized," it was said, "that no relief from payment of normal taxes and surtaxes upon all taxable net income is proposed." The effect of normal and surtaxes, the association explained, "would be to reduce a return of six per cent, before such taxes, to something in the neighborhood of three per cent." Nor is it proposed, the memorandum continued, "to relieve an individual railroad from excess profits taxes in case it should realize earnings in excess of a six per cent return. It is proposed only that so-called 'excess profits' taxes shall not be permitted to impinge upon the earnings of the railroads below the level of a six per cent return upon their invested capital after normal and surtax exactions."

"The impact of an excess profits tax law upon the railroads requires special consideration in the light of the established policy of Congress with respect to transportation, and particularly with reference to the requirements of national defense. The railroads do not suggest that they be exempted from excess profits taxation but special treatment of the railroads in an excess profits tax law is not only

called for by the requirements of national defense but is justified by their status as quasi-public utilities subject to regulation in virtually every aspect of their business, including their accounts, their methods of financing, and the charges they may impose for the services they render. . . .

"The proposal here presented is designed to prevent the recurrence of conditions in the railroad industry which resulted from excess profits taxation during World War II. We advocate no more than protection from taxation as 'excess profits' of earnings clearly not in fact excessive, but on the contrary confined to that rate of return necessary to the preservation and needed improvement of the rail transportation plant and the effective discharge of the indispensable function of the transportation industry. Clearly this degree of protection is demanded, not alone for the benefit of the railroads, but also in the interest of the economy of the country and the defense of the nation."

Additional Provisions

In addition to proposals as to the alternative bases on which earnings should be calculated, and that earnings below a six per cent return should not be regarded as excessive, the railroad memorandum recommended a number of other provisions for inclusion in a proposed excess profits tax law. Among them was a provision for relief from the requirement that, as a condition precedent to change over from retirement to depreciation accounting, accumulated earnings and profits must be reduced by a 30 per cent reserve for past unaccrued depreciation. The association proposed that the two per cent penalty for filing consolidated returns of parent and subsidiary corporations be eliminated.

A similar memorandum was filed with the joint committee by Robert M. Drysdale, Jr., executive vice-president of the Federation for Railway Progress. Any additional taxation on normal railroad earnings may well prove disastrous, Mr. Drysdale warned, noting that the average rate of return from 1946 to 1950 was only 3.31 per cent.

Recalling that from 1921 through 1949 the average rate of return was in the neighborhood of 3.6 per cent, when, he said, public utility companies were earning 6 and 8 per cent on net investment and unregulated industries were getting as much as 15 per cent or more on their net worth, Mr. Drysdale asserted that "the margin of profit in the railroad business was so small as to provide no cushion of safety." The railroads, he added, "have been unable to raise any funds through equity financing for many years and there have been only a few cases since 1930 in which a railroad has been able to raise new money through the issuance of mortgage bonds."

Mr. Drysdale urged that Congress adopt standards of measuring excess profits "comporting to the realities of the situation." His recommendations took the form of six proposals based largely on provision for computation of a railroad company's credit as an amount equal to the aggregate of its normal tax and surtax plus a sum

equal to six per cent of its capital stock, borrowed capital and surplus, with a corresponding adjustment for interest on borrowed capital.

As an alternative, Mr. Drysdale proposed that a railroad company be permitted to compute its credit as an amount equal to the aggregate of its normal tax and surtax plus six per cent of the adjusted basis for determining gain of all its assets including money and current assets less current liabilities.

"No greater disservice could be rendered the national economy," Mr. Drysdale said, "than the imposition of a tax which would create further inroads on the meager income of the railroads, particularly at a time when they are called upon to devote every dollar they can raise from earnings or borrowings to improve their plant and expand their facilities."

Starts Probes of Competing Rail, Truck Rates on Candy

Investigations of rail and motor carrier rates on candy and confectionery moving between points in the South and points in Central and Illinois territories have been instituted by the Interstate Commerce Commission. The inquiries, docketed as No. 30691 and No. MC-C-1203, have both been set for public hearing before Examiner Dishman at Washington D. C., on November 9.

The rates involved are railroad l.c.l. and any-quantity rates, and truck rates on less truckload and any-quantity shipments.

N.W. Board Urges RRs to Grow with National Economy

Some 136 members of the Northwest Shippers Advisory Board and 196 railroaders and guests, at its 94th regular meeting in Fargo, N. D., on October 24, heard a serious discussion of the car situation as it affects their territory. It was declared, among other things, that unprecedented amounts of grain are on the ground awaiting transportation and/or storage and that, due to late planting of certain crops, there would be insufficient cars even for the yield yet to be harvested. Railroad representatives stated, on the other side, that most roads in the territory had 100 per cent or more of ownership on line; that orders diverting empties to them would be continued in force, and that conditions, while unsatisfactory, will grow better rather than worse.

Board General Chairman H. W. Bishop, traffic manager of the Nash-Finch Company, said that, while the international outlook is much brighter than at the July meeting, restrictive orders against shippers—which he forecast at that meeting—have become a reality. In mitigation of the railroads' responsibility for the car shortage, he recalled that there were surpluses "as recently as January, 1950," and that it is heartbreaking for

the railroads themselves to have business offered "with nothing to haul it in." He also repeated his "plugs" for incentive loading rates and for thorough modernization of tariffs—"not just reissuance."

The membership were advised that, by action at a special meeting of the executive committee on September 21, there was formed an emergency terminal transportation committee, under the chairmanship of E. L. Peterson, director of traffic of the Minneapolis Traffic Association. As explained by George Gohlke, secretary of the Northwest Warehousemen's Association, this committee will furnish the machinery by which undue delays in terminals can be ferreted out and called to the atten-

tion of a responsible representative of each of the nine railroads in the area, who would be qualified to take action. R. E. Dobbins, assistant general secretary of the board and traffic manager of the Northrup King & Co., further explained the formation of the committee as a counterpart, with relation to the railroads, to the reactivated car efficiency committee relating to shippers. Service Order 865 (penalty demurrage) directed against shippers and receivers is, he claimed, "self-policing," while No. 866, directed against delays by carriers, is as hard to watch "as getting obedience to 'No Spitting On the Sidewalk.'"

The railroads came in for a barrage of criticism from board members, not

Selected Income and Balance-Sheet Items of Class I Steam Railways in the United States

Compiled from 127 reports (Form IBS) representing 131 steam railways
(SWITCHING AND TERMINAL COMPANIES NOT INCLUDED)

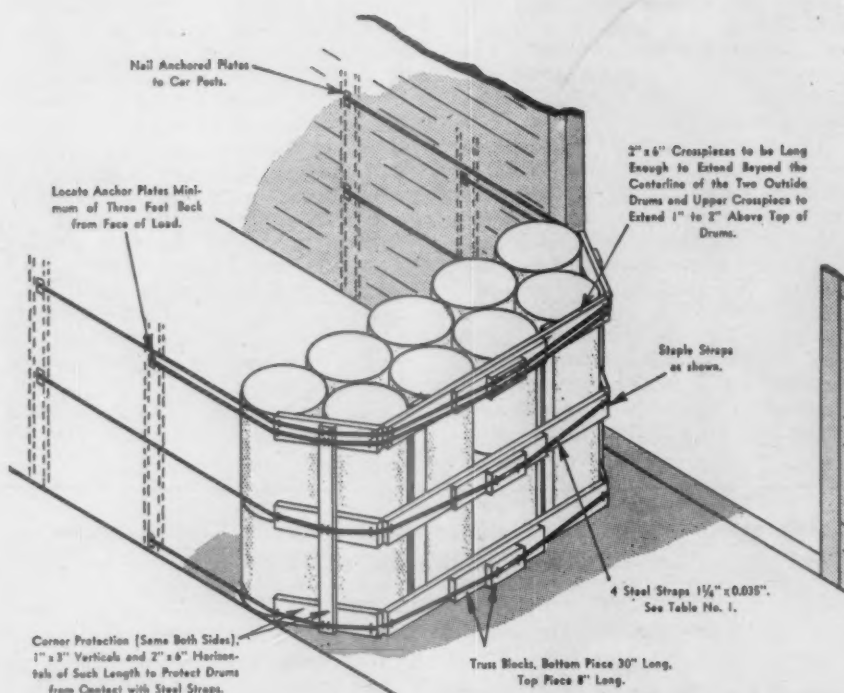
Income Items	United States			
	For month of July 1950	1949	For the seven months of 1950	1949
1. Net railway operating income.....	\$63,910,336	\$50,188,739	\$432,537,945	\$365,986,966
2. Other income.....	16,702,028	17,568,106	129,039,023	122,504,847
3. Total income.....	100,612,364	67,756,845	561,576,968	488,491,813
4. Miscellaneous deductions from income.....	3,635,424	2,482,762	26,376,940	21,359,247
5. Income available for fixed charges.....	96,976,940	65,274,083	535,200,028	467,132,566
6. Fixed charges:				
6-01. Rent for leased roads and equipment.....	9,797,268	9,965,584	66,276,055	67,517,326
6-02. Interest deductions ¹	25,253,667	24,899,385	175,327,423	173,302,442
6-03. Other deductions.....	227,756	209,262	1,523,747	1,367,051
6-04. Total fixed charges.....	35,278,691	35,074,231	243,127,225	242,266,819
7. Income after fixed charges.....	61,698,249	30,199,852	292,072,803	224,865,747
8. Other deductions.....	3,076,927	3,507,934	22,221,256	21,804,814
9. Net income.....	58,621,322	26,691,918	269,851,547	203,060,933
10. Depreciation (Way and structures and Equipment).....	35,795,827	34,030,845	246,660,351	233,667,084
11. Amortization of defense projects.....	1,354,249	1,372,672	9,591,615	9,599,992
12. Federal income taxes.....	44,452,255	17,744,132	189,135,793	146,786,756
13. Dividend appropriations:				
13-01. On common stock.....	4,710,068	3,996,045	26,503,757	24,659,304
13-02. On preferred stock.....	5,552,444	6,139,277	38,219,616	39,838,678
Ratio of income to fixed charges (Item 5 ÷ 6-04).....	2.75	1.86	2.20	1.93
Selected Expenditure and Asset Items				
United States Balance at end of July				
1950 1949				
17. Expenditures (gross) for additions and betterments—Road.....	\$143,712,984	\$191,742,144		
18. Expenditures (gross) for additions and betterments—Equipment.....	429,945,125	624,614,853		
19. Investments in stocks, bonds, etc., other than those of affiliated companies (Total, Account 707).....	473,798,129	521,962,193		
20. Other unadjusted debits.....	109,982,306	137,478,554		
21. Cash.....	858,973,695	699,948,166		
22. Temporary cash investments.....	902,131,170	836,618,684		
23. Special deposits.....	120,270,260	122,030,674		
24. Loans and bills receivable.....	1,047,155	551,469		
25. Traffic and car-service balances—Dr.....	59,498,999	48,197,601		
26. Net balance receivable from agents and conductors.....	148,937,000	125,291,395		
27. Miscellaneous accounts receivable.....	285,150,841	289,195,845		
28. Materials and supplies.....	705,782,148	831,828,639		
29. Interest and dividends receivable.....	10,902,576	10,919,781		
30. Accrued accounts receivable.....	180,354,760	152,380,789		
31. Other current assets.....	33,163,217	39,051,496		
32. Total current assets (Items 21 to 31).....	3,306,211,821	3,156,014,539		
Selected Liability Items				
United States				
Balance at end of July				
1950 1949				
40. Funded debt maturing within 6 months ²	\$145,037,384	\$127,153,117		
41. Loans and bills payable ³	3,683,369	4,415,369		
42. Traffic and car-service balances—Cr.....	96,771,397	74,515,296		
43. Audited accounts and wages payable.....	468,738,227	465,275,599		
44. Miscellaneous accounts payable.....	227,669,370	227,989,590		
45. Interest matured unpaid.....	24,745,321	25,824,448		
46. Dividends matured unpaid.....	7,017,755	7,307,539		
47. Unmatured interest accrued.....	70,799,141	68,706,539		
48. Unmatured dividends declared.....	20,168,412	20,512,913		
49. Accrued accounts payable.....	180,945,807	155,124,786		
50. Taxes accrued.....	660,733,212	728,279,227		
51. Other current liabilities.....	81,296,320	71,896,193		
52. Total current liabilities (Items 41 to 51).....	1,842,568,331	1,849,847,499		
53. Analysis of taxes accrued:				
53-01. U. S. Government taxes.....	484,148,373	563,548,507		
53-02. Other than U. S. Government taxes.....	176,584,839	164,730,720		
54. Other unadjusted credits.....	275,534,138	265,210,180		

¹ Represents accruals, including the amount in default.

² Includes payments of principal of long-term debt (other than long-term debt in default) which becomes due within six months after close of month of report.

³ Includes obligations which mature not more than one year after date of issue.

Compiled by the Bureau of Transport Economics and Statistics, Interstate Commerce Commission. Subject to revision.



OF INTEREST TO MANY TRAFFIC MANAGERS is a publication on the loading of fiberboard drums in closed cars shortly to be released by the Freight Loading & Container Section of the Association of American Railroads. The above illustration is typical of 14 detail drawings and diagrams which accompany the descriptive text. Section Secretary G. H. Ruhle told *Railway Age* that a survey, conducted among representative users of this type of container,

indicated that, although shippers have devoted considerable time and expense in preparation of their commodities for shipment, more adequate methods of loading and bracing the drums in cars are needed. The new publication is designated as No. 314 of the section's General Information Series, and may be procured by shippers, free of charge, from Mr. Ruhle at 50 E. Van Buren street, Chicago 5, Ill.

only for shortages of cars, but for alleged failure "to keep pace with an expanding economy." G. M. Shafer, general traffic manager, Weyerhaeuser Timber Company and former president of the National Association of Shippers Advisory Boards, expressed the opinion that the real cause of the present shortage is that the railroads "did not anticipate their needs . . . The job of the advisory boards is to advise. We expect the railroads to pay some attention to our advice. For three years we have been urging the carriers to build up their car fleets in number and in quality. . . . Yet the serviceable supply continued to decline." He claimed the railroads knew the five-day week was inevitable, that the "machinations of government" would continue in the movement of grain and that the economy was bound to expand. "Yet they did nothing about it," Mr. Shafer said further that, "although the railroads got a little religion on July 28 in Chicago," their intentions are not enough. "I still have faith in the advisory boards and in our privately owned railroads, but the latter must build up their plant—else their affairs will be even more deeply invaded by the politicians."

C. H. Conaway, secretary, North Dakota Farmers' Grain Dealers' Association, a former chairman of the board,

expressed the view that "the railroads have fallen behind in the procession of mass-production industry." He claimed the shippers have a selfish interest in the rail carriers as "the most vital, reliable and necessary form of transportation," and are willing to help them—as in killing the federal 70-car train-limit bill—but that, "if the railroads want to stay in private business they must, now, anticipate the needs of growing production." Pointing out that the government is running the roads right now, Mr. Conway anticipated the government might set up a "stockpile" of freight cars for rental to shippers, saying there is ample precedent, in the large car fleets owned by packers and oil companies. He strongly urged the roads to raise the per diem rate "way up" to encourage ownership and secondly, to "step into the picture and say: 'We'll use our credit for new cars until it breaks.'"

Following these remarks, C. R. Megee, vice-chairman of the Car Service Division, Association of American Railroads, who had previously presented a report on "the national transportation situation," called attention to the fact that "the dollar bill is the medium of exchange in the railroad business as in your business" and that the railroads did not have enough dollars, during the slack traffic periods of

1948 and 1949, to embark on a car-buying spree. He also drew an affirmation from Mr. Shafer that the railroads did not seek nor ask for the penalty orders issued to conserve cars.

Good Service Needs Publicity

Phillip Halverson, traffic manager of Our Own Hardware Company, read, as chairman of the board's committee on l.c.l. transportation, a report urging the railroads to "do a selling job" with package car schedules and, at the same time, encouraging shippers and receivers to "be specific in your routings" so as to take advantage of good service and overhead cars. He pointed out that many shippers have to learn of good service by particular routes "through other than carrier sources." Getting information out, the report averred, will bring in business.

At its joint luncheon with the Fargo Chamber of Commerce, the board heard Ambassador M. A. M. Ispahani, of Pakistan. W. H. Schmidt, Jr., western editor of *Railway Age*, told the board what the British industrial traffic manager faces in dealing with a socialized transport monopoly, and how he has lost the "four freedoms" which are essential ingredients of a traffic manager "if he is to be worthy of his title." The speaker asserted that the danger of nationalized railroads in the United States arises not so much from organized public opinion nor even a government program, but from our inability thus far to make it possible for private investment to live with public investment. "Private operation of any transportation instrumentality now lives in a climate which is hostile, chiefly because the majority of transport plant is supported by the taxpayer, and supported on an unbusinesslike basis. The first job of the traffic manager is to change that environment."

"Fire—Everyone's Concern On a Railroad"

"Nearly every fire, like other accidents, is unnecessary and could have been avoided. To reduce fire losses on a railroad it is necessary to arouse the interest and concern of everyone—officers, employees, shippers and consignees—for anyone can start a fire. Fire prevention is not something you can cram down someone's throat. It has to be sold—and salesmanship of the highest order is called for."

With these remarks, Comptroller F. E. Martin of the Illinois Central summarized the purpose of the Fire Protection & Insurance Section of the Association of American Railroads, before its annual convention at Chicago, October 17-19.

Looking at railroad fire insurance from the standpoint of the insured, Mr. Martin said he had found the most satisfactory form to be that which is reasonably profitable to the insured. But there can and should be no profit from insurance recoveries, he said. (Continued on page 81)

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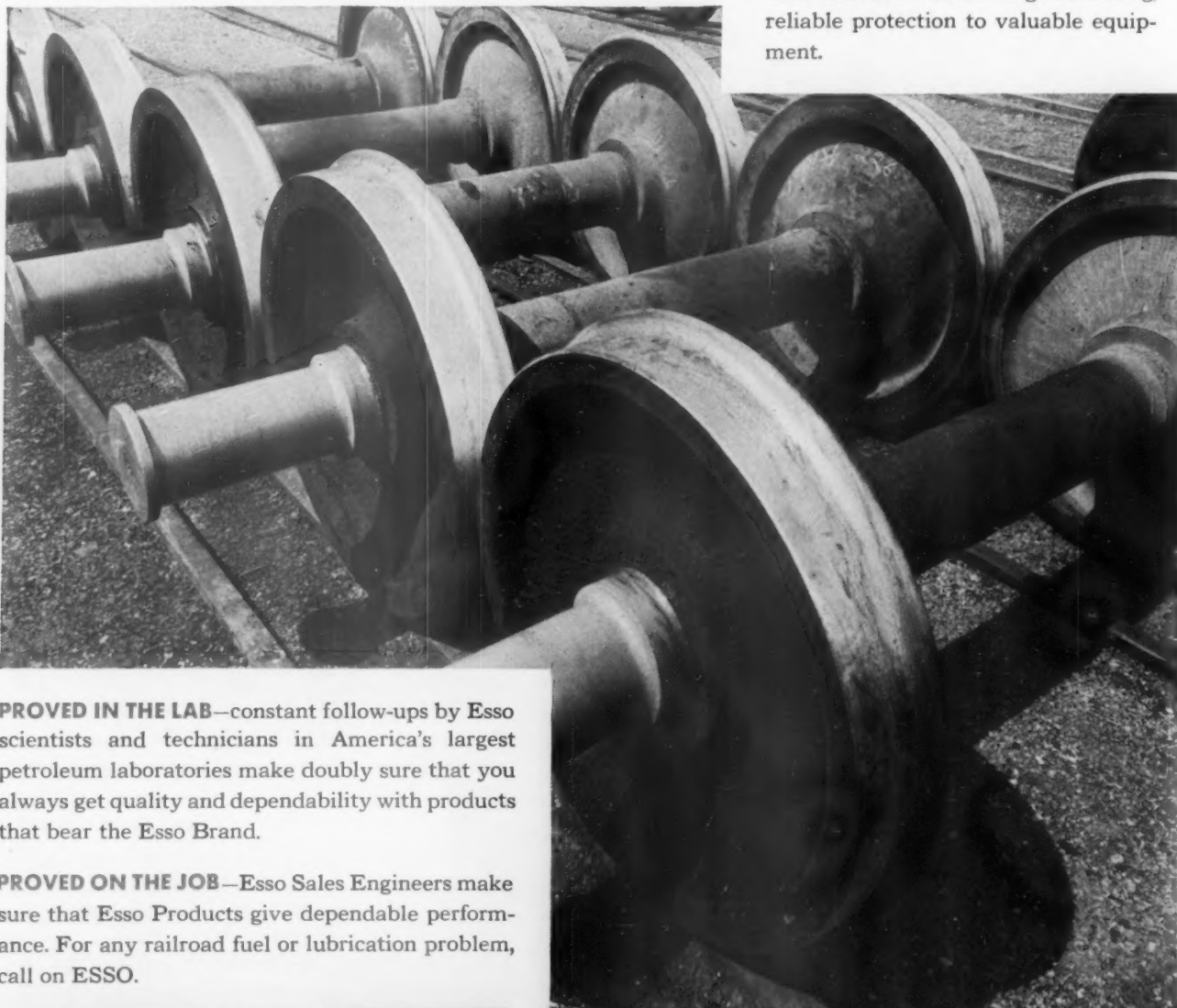
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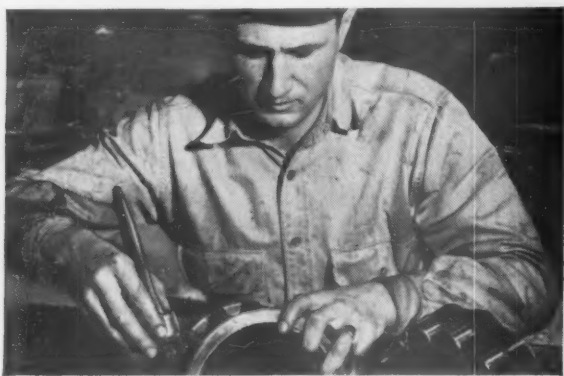


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Car Surpluses and Shortages

Average daily freight car surpluses and shortages for the week ending October 28 were announced by the Association of American Railroads on November 2 as follows:

	Surplus	Shortage
Plain Box	0	18,516
Auto Box	15	250
Total Box	15	18,766
Gondola	18	6,457
Hopper	121	8,107
Covered Hopper	0	150
Stock	49	224
Flat	58	370
Refrigerator	2,363	68
Other	298	94
	2,922	34,236

(Continued from page 78)

"We have had periods in our history where, over a continuous number of years, more than 100 per cent of the premium dollar was returned to us, but during the same period less than half of the total losses were recovered. Such conditions have changed, to the benefit of both the insured and the insurer, so that now a reasonable margin of the premium dollar is retained by the insurer and a high percentage of our total losses are recovered."

To hold down fire losses, Mr. Martin said, one of the principal parts of investigating a fire should be a determination of the cause and its future avoidance. "I have never seen a fire report which said: 'This fire could have been avoided if —.'" Mr. Martin also said that all railroads could benefit from more freely exchanged information about fire loss experience and insurance coverage.

The frequency with which fires occur on railroad properties has increased 12 per cent in the past 10 years, T. W. Adams, assistant manager of the Railway Insurance Association, told the delegates. When 1950 ends, he said, close to \$10 million will have been lost by the industry through fire damage or destruction of railroad properties. "When the movement of materials and troops is so essential to the security of the country, I cannot help but commend to your attention a strong program of improving this prospective," he said.

Diesel equipment, Mr. Adams continued, represents investments running into millions of dollars and warrants immediate consideration as to servicing, fueling and operating exposures to fire. He warned of the potential fire loss where a great many Diesel units are concentrated at one location. "The coordination of operating and mechanical department procedures to avoid the concentration of any more units than necessary is a matter of vital concern."

Smoking, and the careless use of smoking materials should be given

more consideration, he continued. "I have heard so many times that nothing can be done about this evil, but none of my information confirms that this matter has ever been discussed with labor officials. When jobs are endangered by careless habits, much help might be obtained by intelligent discussion and the cooperation of those unions or brotherhoods involved."

A total of 214 delegates attended the three-day convention.

Freight Claim Bill Drops 29 Per Cent Under 1949

A statement released by the Freight Claim Division of the Association of American Railroads shows that, for the first six months of 1950, \$44,810,955 was paid out in freight loss and damage claim payments. This figure is 29.3 per cent below the total paid out by member lines during the same period in 1949.

A spokesman for the A.A.R., however, warned against the superficial conclusion that claim prevention work by the railroads and their shippers alone has cut freight loss and damage to that extent. The campaign is having excellent effect, he said, but there are other factors—such as the reduced backlog of old claims and a decline in the volume of freight traffic (out of proportion to the decline in freight

revenues)—that must be taken into consideration.

For U. S. carriers only, the January-June loss and damage bill came to \$42,534,259, a reduction of 30.3 per cent from the 1949 figure. Freight revenues for the 1950 period totaled \$3.5 billion, of which 1.20 per cent went back to shippers in the form of claim payments. In 1949, 1.69 per cent of the \$3.6 billion freight revenue was paid out in claims.

Of the total 1950 claim bill, 41.3 per cent was paid out for unlocated damage to packaged freight, 12.3 per cent for concealed damage and another 12.7 per cent for damage sustained by unpackaged freight. Loss, both unlocated and theft, accounted for 11.2 per cent of the total claim bill, while delays took another 5.2 per cent. Other factors, such as improper handling in yards, trains or stations, defective equipment, temperature failures, catastrophes, train accidents and errors by employees accounted for the remainder of the railroads' claim bill.

Freight Car Loadings

Loadings of revenue freight in the week ended October 28 totaled 887,607 cars, the Association of American Railroads announced on November 2. This was a decrease of 3,383, or 0.4 per cent, compared with the previous



FIVE COMMUNICATIONS AND SIGNALING ENGINEERS and executives from various European railroads recently visited Pennsylvania Station, New York, to study the new "Intelix" system for handling train reservations. They were touring the United States under the Economic Cooperation Administration's technical assistance program and are among 85 railroad officials and industrialists of 12 Marshall Plan countries who will take back those American techniques which might be applied in Europe to add to the efficiency of a transportation system restored almost to normal from the wreckage of World War II. Their trip was made possible through cooperation of member railroads of the Association of American Railroads. Shown grouped around recorded availability console unit of new Intelix

equipment are (left to right): J. S. Jammer, vice-president, International Standard Trading Corporation, builders of the Intelix system, who explained device; Albert Dobmaier, Ministerialdirigent in charge of signals and telecommunications, German Federal Railways; Paul C. J. M. Schoonjans, engineer, telecommunications branch, Direction of Electricity and Signals, Belgian State Railway; Carl L. V. Christensen, signal engineer, Danish State Railways; W. R. Triem, general superintendent, telegraph, of the Pennsylvania, who served as escort-consultant to the group; Alighiero Bottaro, first technical inspector, North Milan Railways, Italy; and Custodio de A. Nazareth, assistant engineer, Portuguese Railways. Operating the unit is Miss Ella M. Stratton, of the reservation bureau staff.

week; an increase of 296,292, or 50.1 per cent, compared with the corresponding week last year; and a drop of 43,366, or 4.7 per cent, compared with the equivalent 1948 week.

Loadings of revenue freight for the week ended October 21 totaled 890,990 cars, and the summary for that week as compiled by the Car Service Division, A.A.R., follows:

REVENUE FREIGHT CAR LOADINGS For the week ended Saturday, October 21			
District	1950	1949	1948
Eastern	153,852	113,421	164,162
Allegheny	175,016	90,620	185,977
Pocahontas	67,801	19,931	69,022
Southern	134,010	104,438	140,273
Northwestern	146,038	81,827	143,048
Central Western	147,311	130,401	150,993
Southwestern	66,962	48,450	73,501
Total Western Districts	360,311	260,678	367,542
Total All Roads	890,990	589,088	926,976
Commodities:			
Grain and grain products	59,963	57,349	55,919
Livestock	16,688	19,092	22,229
Coal	165,667	52,482	178,185
Coke	16,422	3,909	15,458
Forest products	47,191	40,781	50,558
Ore	71,665	6,832	66,018
Merchandise l.c.l.	88,678	88,341	111,909
Miscellaneous	424,716	320,302	426,700
October 21	890,990	589,088	926,976
October 14	888,559	583,948	912,957
October 7	863,676	574,228	891,651
September 30	879,985	658,128	908,866
September 23	870,196	661,468	908,592
Cumulative total 42 weeks ..	31,142,487	29,560,242	34,956,619

In Canada.—Car loadings for the week ended October 21 totaled 92,733 cars, compared with 81,211 cars for the previous week, and 86,769 cars for the corresponding week last year, according to the Dominion Bureau of Statistics.

	Revenue Cars Loaded	Total Cars Rec'd from Connections
Totals for Canada:		
October 21, 1950	92,733	35,296
October 22, 1949	86,769	32,878
Cumulative totals for Canada:		
October 21, 1950	3,100,259	1,307,407
October 22, 1949	3,152,200	1,295,658

B.&B. Supply Men—Correction

In reporting the election of officers at the annual meeting of the Bridge & Building Supply Men's Association in the *Railway Age* of October 7, it was erroneously indicated that Harry Wolfe of the Lehon Company, a newly elected director of the association, is located at Milwaukee, Wis. Mr. Wolfe makes his headquarters in the main office of the Lehon Company at Chicago.

"Name the Train" Contest For New G.N. Streamliner

The Great Northern has announced a \$500 prize contest to find a name for its forthcoming transcontinental streamliner which will be placed in service between Chicago and Seattle, Wash., and Portland, Ore., during 1951. Limited to railway ticket agents, reservation bureau employees, station ticket sellers and employees of recognized travel and tourist agencies in the United States and Canada, the contest will close at midnight November 30.

Contestants must accompany their name selection with a 25-word (or less) supporting statement. Entries will

be judged by Irving F. Lyons, president, National Industrial Traffic League; Frank J. Rehban, president, National Association of Shippers Advisory Boards; Albert Kalmbach, publisher, *Trains* magazine; and Henry B. Comstock, editor, *Railroad Magazine*. The G. N. has stated that contestants may submit as many names as they wish, but that each must be mailed separately and be accompanied by a statement of reasons.

U. S. Chamber Suggests Car-Shortage Cures

Ways of alleviating railroad freight car shortages are suggested by the Chamber of Commerce of the United States in a six-page illustrated pamphlet. The pamphlet, entitled "How You Can Help Reduce the Freight Car Shortage," carries a check list for shipping operations as follows:

1. Load cars to full limit;
2. Load cars promptly;
3. Notify railroad immediately when empty car is available;
4. Load and unload cars six days a week;
5. Load cars in direction of owner's rails;
6. Remove all dunnage, blocking and rubbish from cars;
7. Order cars only as needed;
8. State needs as to size, type, destination and route; and
9. Avoid loading high class cars with contaminating commodities.

Barriger Addresses Communications Men

As reported in the October 21 *Railway Age*, the 27th annual meeting of the Communications Section, Association of American Railroads, was held at French Lick, Ind., October 17-19, the attendance of 525 persons being the largest in the history of the section. In his opening address before this body on October 17, J. W. Barriger, president of the Chicago, Indianapolis & Louisville, declared: "The more complicated and widespread railroad operations become, the more management is dependent upon modern communication facilities to know what is going on, and to initiate the actions which must be taken to keep trains and traffic moving safely, expeditiously and economically."

Continuing, he said that the history of the adaption of communications progress to railroad service is one of the brilliant chapters of its history. The past decade has been characterized by extraordinary acceleration in communications, Mr. Barriger added, especially as the amazing discoveries and inventions in the rapidly widening field of electronics have given unlimited dimension, or the early promise of it, to the instantaneous transmission of light, color and sound.

"The modern devices and methods of communication, which are in continuous use in railway operation, have made comparable forward strides in extending the range over which railway

personnel has continuous coverage of information by the simultaneous two-way transmission of the typed, or written word," he said. Pointing out that "now the most recent and important advances permit continuous contact with moving trains and also between separate ones and between the various crew members of the same one," the president of the Monon declared "this constitutes a development of the most profound significance, both in reference to expediting movement and preventing accidents by providing an additional safeguard to reinforce the protection of automatic block signals."

The further improvement which may be expected in telephone and radio communications systems, Mr. Barriger predicted, should permit as effective coordination and direction of every phase of railway activity as though it were carried on within the immediate sight and hearing of supervisory officers. Radar and television also will doubtless be integrated into railway operation in the near future to provide additional factors of protection and means of exchanging information, he observed. "Modern communications is the heart of the railroad's system of intelligence and control," Mr. Barriger told the section. "Present competitive conditions and technical advancements in other component fields of railway operation join together in placing increasingly difficult work but commensurately enlarged opportunities ahead of your communications officers."

T.A.A. Holds "Freedom Dinners" in Two Cities

Dangers to American freedoms, and positive steps to preserve that freedom, furnished the theme for a November 1 "Freedom Dinner" at Pittsburgh, Pa., attended by farm, civic, and business leaders from three states. Sponsored by the Transportation Association of America, with the cooperation of a score of major organizations of the Allegheny area, the meeting featured four speakers:

C. E. Wilson, president of General Motors Corporation; W. I. Meyers, dean of agriculture at Cornell University; Frank R. Denton, vice-chairman of the Mellon Bank & Trust Co., and James M. Symes, vice-president of the Pennsylvania. J. A. Appleton, vice-president of the Pennsylvania at Pittsburgh, was chairman, and A. N. Williams, president of Westinghouse Air Brake Company, toastmaster.

Mr. Wilson summed up the evening's discussions with 10 "essentials of a free society." He also said the promoters of communism and socialism are not only the party liners, the class-conscious and the misled, but "those who in their eagerness to make social progress do not understand the difference between being social-minded and socialistic."

Mr. Denton, discussing financial hazards, said we are already in an inflationary period; that "The trend of

increasing civilian expenditure must be reversed—all agencies that are not essential to defense must be reduced or eliminated. We are faced with a choice between short-term, individual security and long-term, national security."

Mr. Symes described the major threats to the stability of transportation as:

1. Over-regulation, including the difficulty of getting rates adjusted to meet new costs; the difficulty of eliminating services which do not pay; and the trend toward even greater regulation of management operations.

2. Subsidized competition. "All we ask is equality of treatment, and from there it is up to each transportation agency to demonstrate its ability to survive under the free enterprise system."

3. Labor demands, and the competitive activities between many unions, the pressure demands from one union after another, "each trying to outdo the other." Mr. Symes said workers must be adequately taken care of, "but there is a distinction between adequately and exorbitantly."

At a similar dinner in Milwaukee, Wis., on October 26, sponsored by the T.A.A. and 15 Wisconsin organizations, speakers were Allan B. Kline, president of the American Farm Bureau Federation; and Roy C. Ingersoll, president of Borg-Warner Corporation.

RRs Severely Handicapped

Transportation, Mr. Williams said, "is perhaps more susceptible to government ownership and control than any other industry." The railroads, he added, "operate under very severe handicaps which result from our present system of laws with respect to taxation, and the manner in which, up to this time, we have been financing development and improvement of waterways, airways, and dirt-surfaced highways."

Mr. Williams quoted from various studies to show how highway costs are distributed, how government funds aid in airport construction and maintenance, and in air mail subsidies, and how federal funds aid in development of waterways. "These artificial competitive handicaps placed upon railroads by our laws must be removed if we wish to continue the railroad system in a sound and healthy condition, so that it may be maintained as a private enterprise," he continued. "With the full cost of the service of each agency reflected in its charges to the public, if the railroads cannot continue to operate successfully, I, for one, will be content to see them pass out. It is my belief, however, that under such conditions they will not pass out. Given fair and equal opportunities I believe they will go on to new heights of efficiency and success."

August Accident Statistics

The Interstate Commerce Commission has made public its Bureau of Transport Economics and Statistics' preliminary summary of steam railway accidents for August and this year's first eight months. The compilation, which is subject to revision, follows:



SAVED FROM THE ACETYLENE TORCH, this Chicago & North Western System (Chicago, St. Paul, Minneapolis & Omaha) Atlantic-type locomotive will be pastured to the Minnesota state

fair grounds as part of a permanent exhibit sponsored by the Minnesota Railfans Association of Minneapolis and St. Paul

Item	Month of August		8 months ended with August	
	1950	1949	1950	1949
Number of train accidents*	964	712	6,357	5,882
Number of accidents resulting in casualties	55	44	305	324
Number of casualties in train, train-service and non-train accidents:				
Trespassers:				
Killed	140	156	795	853
Injured	117	130	771	760
Passengers on trains:				
(a) In train accidents*				
Killed	2	—	41	1
Injured	115	133	854	359
(b) In train-service accidents				
Killed	5	1	17	14
Injured	183	183	1,297	1,392
Travelers not on trains:				
Killed	1	1	4	4
Injured	41	61	482	499
Employees on duty:				
Killed	32	32	208	268
Injured	2,003	2,027	13,294	15,485
All other nontrespassers:**				
Killed	142	109	1,013	997
Injured	516	360	3,705	3,516
Total—All classes of persons:				
Killed	322	299	2,078	2,137
Injured	2,975	2,894	20,403	22,011

*Train accidents (mostly collisions and derailments) are distinguished from train-service accidents by the fact that the former caused damage of \$275 or more to railway property. Only a minor part of the total accidents result in casualties to persons, as noted above.

**Casualties to "Other nontrespassers" happen chiefly at highway grade crossings. Total highway grade-crossing casualties for all classes of persons, including both trespassers and nontrespassers, were as follows:

Persons:					
Killed	.....	128	94	937	909
Injured	.....	333	182	2,547	2,257

Further Improvements In N.Y.C. L.C.L. Service

The second of the New York Central's bulletins on changes in its merchandise service (l.c.l.) has just been issued. (The first was summarized in *Railway Age's* Freight Traffic Issue of September 2.)

The second bulletin, dated October, mentions that to expedite the handling of connecting line freight, an overnight merchandise car has been established from Indianapolis, Ind., to the Illinois Central at Louisville, Ky.

Faster service from Cleveland, Ohio, to Kansas City, Mo., also was announced by the N.Y.C., when freight is routed via N.Y.C. to Chicago and thence

to K.C. on the Atchison, Topeka & Santa Fe. Such freight is scheduled for second morning arrival in Kansas City. In addition, a new Albany (N.Y.)-Troy car will be dispatched daily to Detroit, Mich., with third morning arrival contemplated.

A speed-up in merchandise schedules for freight originating at (or via) Buffalo, N. Y., Syracuse, Utica and New York, destined to St. Louis and connections at that city has been provided by loading such freight in East St. Louis through cars and not to intermediate transfers.

Pittsburg & Shawmut Rebuilding 200 Hoppers

The Pittsburg & Shawmut has placed an order for rebuilding 200 hopper cars with the International Railway Car & Equipment Manufacturing Co. The project will require approximately 800 tons of steel, effecting a saving, compared with building new cars, of about 2,800 tons.

OVERSEAS

British Transport Shows Deficit of £20.8 Million

An overall loss of £20.8 million—equivalent, at the current exchange rate of \$2.80 to the pound sterling, to \$58,240,000—was incurred by the British Transport Commission during the calendar year 1949, according to the commission's recently released report for that period. This was more than four times the total deficit of £4.7 million (\$13,160,000) reported by the commission for 1948, the first year of British government operation of transportation and related facilities.

The 1948 report was summarized in the *Railway Age* of October 1, 1949, page 58, while pertinent figures from both that and the 1949 reports, for the commission as a whole and for its rail- (Continued on page 86)



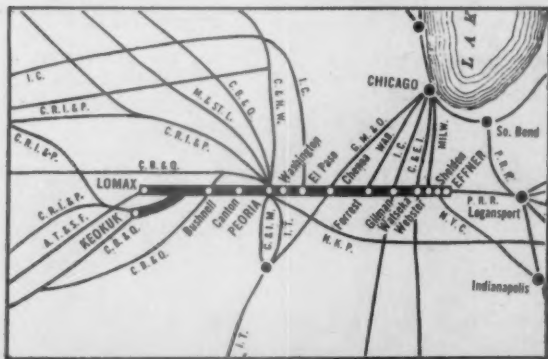
says H. E. Reeves, T.P. & W. Gen

"T.P.&W. connects with top-notch railroads and we want shippers to know it! It means we can serve them better—giving them greater freedom in routing cross-country shipments. And we can divert cars quickly to any point in the country—with no unnecessary delay whatsoever.

"We also serve the railroads themselves. Crossing Illinois, T.P.&W. joins 16 busy railroads—and through them, every other railroad in the U.S. and Canada—carrying countless tons of freight from one to another. To shippers and railroads alike, our fine connections are of real value."

You do business with people . . . so meet H. E. Reeves, creator of this month's T.P.&W. advertisement. General Agent Reeves tells us he was born "too many" years ago, over the combination ticket and freight office, warehouse and waiting room of the Great Northern Railroad Station in Florence, Minnesota. The family was living in four rooms provided by the Great Northern Railroad, for which Mr. Reeves, Senior was Agent-Operator.

True to his heritage, H. E. Reeves began work-



ing in 1917 as a clerk for the Rock Island Lines. From car clerk he moved to chief clerk, employed by the Wichita Terminal. His next move was into the Traffic Office of the Illinois Central System in Kansas City. He later traveled nooga & St. Louis Railroad for the Wichita Flour T.P.&W. and is now



Mr. Reeves is married, has two daughters, a son and a grand-daughter.

Hubert Conliffe

J. Russel Coulter
PRESIDENT

Office
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Keep your
CONNECTIONS
a secret"

P.&W. General Agent at Wichita, Kansas



Offices in 20 principal cities
General Offices: Peoria, Illinois

The Road That's Best...Links East and West

(Continued from page 83)

way operations, are given in tables herewith.

The larger deficit was attributed in part to continued increases in wage and price levels, which are now said to be more than double their prewar figures—and in individual cases much more than double—while transportation rates, on the average, are only about 65 per cent above prewar levels. (Some freight rates, however, are up as much as 83 per cent.) Higher costs and declining traffic "were greatly accelerated in the later months," according to the Railway Gazette (London), which states that, "by the close of the year the estimated deficit was running at the rate of well over £500,000 a week." In view of the year's results, nothing was available for allocation to general reserve or replacement funds.

Railway coal, mineral and heavy merchandise traffic were larger in 1949 than in 1948, as was traffic in textiles, newspapers and periodicals, but general merchandise and government traffic were lower. There was also, apparently, a considerable diversion of traffic from railway to highway transportation. Road transport, in fact, accounted for 8 per cent of all B.T.C. transportation revenues in 1949 as compared with only 3 per cent in 1948, while the railroad proportion of total commission revenues declined from 73 per cent in 1948 to 68 per cent in 1949. The decline in railroad passenger traffic was attributed primarily to decreases in revenue from workmen's tickets and in seasonal and military travel, and some diversion to highway services.

In efforts to reduce operating losses, the total number of railway employees was cut 24,212, from 648,740 on December 31, 1948, to 624,528 on December 31, 1949. Including points or lines from which services had been tempor-

arily withdrawn before 1948, 92 stations and 23 branch lines totaling approximately 116 route miles were closed or abandoned during 1948 and 1949, while 15 other branches, aggregating 118 route miles, were closed to passenger service. On the other hand, new rails or ties, or both, were laid on some 2,000 mi. of line, and the Liverpool Street-Shenfield electrification was completed.

A total of 391 new locomotives, 1,582 passenger cars and 32,490 new freight cars were built during the year, while the percentage of all classes of equipment awaiting repair was reduced.

ORGANIZATIONS

A.S.M.E. Annual Meeting

New researches, applications and operations on current developments within the engineering profession will be discussed at the 83rd annual meeting sessions of the American Society of Mechanical Engineers to be held at the Hotel Statler, New York, November 26 to December 1, inclusive. Simultaneously, the National Power Show, now under the auspices of the A.S.M.E., will be held at Grand Central Palace, New York. The annual banquet of the society is scheduled for 6:30 p.m., Wednesday, November 28. The program, in part, is as follows:

MONDAY, NOVEMBER 27

12:15 p.m.

President's Luncheon

The Individual and Free Enterprise, by A. W. Robertson, board chairman, Westinghouse Electric Corporation.

OPERATING RESULTS, BRITISH RAILWAYS

	1949	1948	Increase or Decrease
OPERATING REVENUES:			
Passenger	£113,962,732	£122,589,789	—£ 8,627,057
Freight	178,716,683	180,516,713	— 1,800,030
Mail, parcel post, parcels and other merchandise	29,011,155	29,350,896	— 339,741
Miscellaneous	3,797,875	3,677,998	+ 119,877
Total	£325,488,445	£336,135,396	—£10,646,951
OPERATING EXPENSES (including depreciation or renewals, but not including abnormal maintenance):			
Train operation	£112,841,002	£113,343,442	—£ 502,440
Maintenance and depreciation of equipment	64,704,179	60,423,640	+ 4,280,539
Maintenance and renewal of way and structures	49,658,333	48,799,664	+ 858,669
Other traffic expenses	76,092,174	78,360,920	— 2,268,746
General expenses	9,531,948	8,949,993	+ 581,955
Total	£312,827,636	£309,877,659	+£ 2,949,977
NET OPERATING REVENUE	£ 12,660,809	£ 26,257,737	—£13,596,928
OPERATING RATIO (per cent)	96	92	+4

SUMMARY OF ANNUAL REPORT OF BRITISH TRANSPORT COMMISSION

(000,000 omitted)

	1949	1948	Increase or Decrease
Gross revenue from transportation operations	£477.6	£461.6	+£16.0
Operating and miscellaneous expenses	304.0	288.2	+ 15.8
Maintenance, depreciation and renewals	152.2	137.0	+ 15.2
Net revenue from transportation operations	£ 21.4	£ 36.4	—£15.0
Other income (hotels, advertising, rents, interest, etc.)	9.9	8.8	+ 1.1
Total income	£ 31.3	£ 45.2	—£13.9
Interest and administration expenses	48.6	46.9	+ 1.7
Deficit before special charges	£ 17.3	£ 1.7	+£15.6
Additional charges	3.5	3.0	+ 0.5
Total net deficit	£ 20.8	£ 4.7	+£16.1

TUESDAY, NOVEMBER 28

9:30 a.m.

Railroad (I)—Materials Handling (I)
Symposium: Development of Special Freight Cars Designed for Protection of Lading

Design Features of the General American-Evans "Damage Free" Box Car, by R. M. Lamport, assistant vice-president, General American Transportation Corporation
Special Loading Cars in Automotive-Parts Service, by F. W. Hess, general car and loading inspector, Chesapeake & Ohio

2:30 p.m.

Railroad (II)—Fuels (I)

Symposium: Performance Experience with Double-Screened Locomotive Fuel

Speakers: John S. Swan, fuel-conservation engineer, Louisville & Nashville; Earl C. Payne, consulting engineer, Pittsburgh Consolidated Coal Company; H. G. Pike, superintendent of equipment, Pittsburgh & Lake Erie; and W. O. Cottingham, superintendent of locomotive performance, Western Maryland

Experimental Locomotive with Cinder-Collection and Ash-Disposal System, by Elmer J. Boer, assistant supervisor; John M. Allen, research engineer; and Bertrand A. Landry, supervisor, Battelle Memorial Institute

5 p.m.

Roy V. Wright lecture

WEDNESDAY, NOVEMBER 29

9:30 a.m.

Gas-Turbine Power (V)—Fuels (III)

Pressure and Residence Time Effects on Combustion of Pulverized Coal, by W. E. Young

Technical and Commercial Aspects of the Application of Residual Oil as Fuel for Gas Turbines and High-Temperature Boilers, by C. F. Kottcamp and L. O. Crockett, Gulf Oil Corporation

Railroad (III)

Progress in Railway Mechanical Engineering—Report of Committee RR-6 Survey, by R. M. Coultas, transportation divisions, General Electric Company

Progress Report on the Alco-G.E. Gas-Turbine Electric Locomotive, by A. H. Morey, locomotive engineering division, General Electric Company

Development of the Aluminum Tank Car, by G. B. Hauser, chief railroad-development engineer, Aluminum Corporation of America

2:30 p.m.

Materials Handling (IV)

Material-Handling Equipment in Railway Express Service, by C. G. Peterson, chief engineer, Railway Express Agency

Mechanical Handling of Warehousing and Shipping—General Electric Refrigeration and Home Freezers, by C. H. Pace, Jr., General Electric Company

THURSDAY, NOVEMBER 30

9:30 a.m.

Boiler Feedwater Studies—Power (IV)

Simplified Process for Determining Steam Purity, by S. T. Powell, consulting chemical engineer, Baltimore, Md., and I. G. McChesney, assistant superintendent electric operations and planning, Rochester Gas & Electric Corp.

The Prevention of Embrittlement Cracking, by A. A. Berk, supervising chemist, boiler water research section, Bureau of Mines

The Solubility of Quartz and Some Other Substances in Superheated Steam at High Pressures, by G. W. Morey, physical chemist, and J. M. Hesselgesser, geophysical laboratory, Carnegie Institution of Washington

12:15 p.m.

Fuels Luncheon

Changes in Patterns of Fuel Supply, by Dr. James Boyd, director, U. S. Bureau of Mines

FRIDAY, DECEMBER 1

2:30 p.m.

Fuels (IX)—Air Pollution—Power (VIII)

Background of Present Smoke-Regulation Ordinances, by J. F. Barkley, chief, Fuels Utilization Division, U. S. Bureau of Mines

Present Status of Air-Pollution Control, by H. P. Munger, assistant supervisor in charge of air pollution control, Battelle Memorial Institute

Motive power and rolling stock developments of the past 100 years will be traced for the Chicago Chapter of the Railway & Locomotive Historical Society by A. G. Hoppe, engineer in charge of research and development for the Chicago, Milwaukee, St. Paul & Pacific. Mr. Hoppe will give his

illustrated talk at the November 10 meeting of the group, to be held in the 15th floor auditorium of the Field building, 120 West Adams street, Chicago.

The **Eastern Car Foreman's Association** will hold its next meeting on November 10 in room 502, Engineering Societies building, 29 West 39th street, New York, at 6 p.m. R. G. Welch, assistant to chairman, board of transportation, New York, will speak on "the railroad man and civil defense."

The 62nd annual convention of the **National Association of Railroad and Utilities Commissioners** will be held at the Westward Ho Hotel, Phoenix, Ariz., November 13-16. A partial list of activities includes the following: On November 13, Harry M. Miller, president of the association, will present an address, and Walter R. McDonald, general solicitor, will report on activities of the association's Washington office. A report of the committee on cooperation between state and federal commissions will be presented at the November 14 morning session by N. B. Knight, chairman. Reports also will be heard from committees on progress in regulation of transportation, C. B. Beel, chairman, and on safety of operation of transportation agencies, C. L. Doherty, chairman. The special committee on excess profits taxes, Justus F. Craemer, chairman, will report on November 15. Also on that date, Benjamin F. Feinberg will lead a discussion on "Federal encroachment upon state regulation in the public utility field." At the November 16 morning session, Lawrence W. Cannon, chairman, will present a report of the special committee on cooperation with the I.C.C. in study of the railroad passenger deficit problem; C. A. Merkle, chairman, will report on rates of transportation agencies; and W. T. Brooks, chairman, will present a report of the committee on service and facilities of transportation agencies. The topic for discussion on the last day of the convention will be "Effect of defense legislation on public utility regulation," led by James K. Knudson, member, I.C.C., and Justus F. Craemer. At the November 16 afternoon session H. M. Nicholson, chairman, will present a report of the special committee on uniform motor freight and railroad classification.

SUPPLY TRADE

J. H. Perry, Jr., formerly representative in Philadelphia, Pa., for the **Edgewater Steel Company**, has been appointed a district manager, with headquarters as before at 989 Broad Street Station building, Philadelphia. Mr. Perry will be responsible for sales in the Philadelphia and Washington, D. C., territories, as well as general supervision of the Baltimore,

Md., office. **M. A. Carlton** will continue as representative in the Baltimore territory.

Allan L. Davis has been appointed manager of service of the transportation divisions of the General Electric Company's apparatus department in Schenectady, N. Y. The position is newly created and will be one of evaluating and analyzing service requirements for the transportation in-



Allan L. Davis

dustrial. Mr. Davis joined G. E. as service engineer in the Los Angeles, Cal., office in 1945. He later was appointed transportation engineer and, in May, 1947, was transferred to Schenectady as manager of the Alco-GE service engineering division, the position he held until his recent appointment.

John B. Keeler, manager of the traffic and transportation department of the **Koppers Company** since 1947, has been appointed a vice-president of



John B. Keeler

the firm. Mr. Keeler joined Koppers as assistant traffic manager in 1928 and, in August, 1946, was appointed assistant manager of the traffic and transportation department.

William B. Renois, general manager of sales of the **Gerrard Steel Strapping Company (United States**

Steel Corporation subsidiary), has been elected sales vice-president, succeeding **S. G. Adolf Larsen**, who has been appointed assistant to the president.

Robert P. Underwood has been appointed sales engineer of the **Pyle-National Company**. With headquarters at the main plant in Chicago, Mr. Underwood will cover all railroads in the United States.

The **A. M. Byers Company**, Pittsburgh, Pa., has appointed **A. D. Sheere** as manager of the San Francisco, Cal., division, to succeed **P. D.**



A. D. Sheere

Tabler, who has retired. Mr. Sheere joined the Byers firm in 1924 and formerly was manager of the Houston, Tex., division. **N. L. Brown**, former-



N. L. Brown

ly field service engineer with the St. Louis, Mo., division, has been appointed to succeed Mr. Sheere in Houston. Mr. Brown joined the organization in 1940.

J. T. Elwood, sales representative, serving railroads in Texas and Louisiana, for the **Vapor Heating Corporation**, with headquarters at Houston, Tex., has been transferred to Chicago, where he will be in sales, work-

ing out of the main office. Succeeding Mr. Elwood at Houston is **P. M. Higgins**, who has been working with railroads out of the St. Louis, Mo., office. **R. M. Teichler**, who has been working out of the main plant at Chicago, moves to St. Louis, to succeed Mr. Higgins.

Richard H. DeMott, formerly vice-president in charge of sales of **SKF Industries, Inc.**, has been elected president.

William T. Kelly, Jr., has been appointed president of the American Brakeblok division of the **American Brake Shoe Company** and, in addition to his new duties, will continue as president of the Kellogg division. **Maynard B. Terry**, vice-president, located at the Brakeblok division's headquarters in Detroit, Mich., will continue in charge of Brakeblok sales.



William T. Kelly, Jr.

Mr. Kelly joined the company in 1928 as a molder's helper at the National Bearing division, St. Louis, Mo. He was appointed general purchasing agent in 1940 and was successively vice-president and president of the Kellogg division, vice-president and director of the Canadian Ramapo division, president of the engineered castings division, and vice-president of the Brake Shoe Company.

Ray A. Burt has been appointed Pacific coast district sales manager of the Ramapo Ajax division of the **American Brake Shoe Company**. He joined the company in 1937 and has been sales representative in the Pacific coast district since 1944. Mr. Burt will continue to be located at Los Angeles, Cal.

The Cleco division of the **Reed Roller Bit Company**, Houston, Tex., has appointed the **Granite City Tool Company**, Box 368, St. Cloud, Minn., as distributor of Cleco products in that area.

Hunter Michael has been elected vice-president of the **American Loco-**

motive Company. Mr. Michael has been director of the company's railway steel spring division, with plants at Latrobe, Pa., and Chicago Heights, Ill., since 1944.

EQUIPMENT AND SUPPLIES

Domestic Equipment Orders Reported in October

Domestic orders for 302 Diesel-electric locomotive units and 13,575 freight-train cars were reported in *Railway Age* in October. Estimated cost of the locomotive units is \$49,630,000, and of the freight-train cars, \$71,460,000. An accompanying table lists the orders in detail. (The freight-train cars listed in the table are also included in the tabulation by purchaser of all freight-train cars reported ordered during the first 10 months of 1950, which appears in this issue's feature section.)

During the first 10 months of 1950, *Railway Age* has reported domestic orders for 113,345 freight-train cars, costing approximately \$572,446,600; 42 passenger-train cars costing about \$4,844,000; and 2,322 Diesel-electric locomotive units, 15 steam and 12 electric locomotives, costing an estimated \$347,666,000.

FREIGHT CARS

The **Akron, Canton & Youngstown** has ordered 150 50-ton box cars from the Pullman-Standard Car Manufacturing Company at an estimated cost of \$780,000. Delivery of the cars, inquiry for which was reported in *Railway Age* of June 3, page 56, is scheduled for April, 1951.

The **Boston & Maine** will lease, under the Equitable Life Assurance Society's rental program, 750 50-ton box cars, scheduled for March, 1951, delivery from the Pullman-Standard Car Manufacturing Company. The inquiry for these cars was reported in *Railway Age* of July 8, page 109.

The **Duluth, Missabe & Iron Range** has ordered 300 70-ton hopper cars from the Pullman-Standard Car Manufacturing Company for delivery in the second quarter of 1951.

The **Georgia** has ordered 50 50-ton box cars from the Pullman-Standard Car Manufacturing Company at an estimated cost of \$260,000. Delivery is scheduled for the third quarter of 1951.

The **Atlantic Coast Line** has ordered 500 50-ton box cars, 400 50-ton high-side gondola cars, 400 50-ton low-side gondola cars and 100 70-ton mill-type gondola cars from the American Car & Foundry Co., and 100 70-ton

(Continued on page 93)

		Locomotives		Builder
Date	Purchaser	No.	Type	
Oct. 7	Equitable Life Assurance Society	86*	1,500-hp. Freight	Electro-Motive
		4*	2,250-hp. Passenger	Electro-Motive
Oct. 14	N. Y. C.	34	1,500-hp. "A" Freight	Electro-Motive
		4	2,250-hp. "A" Passenger	Electro-Motive
		50	1,500-hp. Rd.-Switch.	Electro-Motive
		20	1,200-hp. Switching	Electro-Motive
		2	1,600-hp. "A" Freight	American-G. E.
		10	1,600-hp. "B" Freight	American-G. E.
		50	1,600-hp. Rd.-Switch	American-G. E.
		13	1,600-hp. Rd.-Switch	Fairbanks, Morse
		17	1,200-hp. Rd.-Switch	Lima-Hamilton
Oct. 21	C. M. St. P. & P.	6	3-unit 4,800-hp. Frt.	Fairbanks, Morse
Oct. 28	C. & E. I.	6	1,500-hp. Gen. Purpose	Electro-Motive
*To be leased to the Baltimore & Ohio.				
		Freight Cars		Builder
Date	Purchaser	No.	Type	
Oct. 7	A. C. & Y.	50	70-ton Cov. Hopper	Greenville Steel Car
Oct. 7	Erie	100	Cov. Hopper	R. R. Shops
Oct. 14	D. & R. G. W.	500	70-ton Triple Hopper	Pressed Steel Car
		25	70-ton Cov. Hopper	American Car & Fdy.
		50	50-ton Flat	R. R. Shops
Oct. 14	M. St. P. & S. Ste. M.	150	50-ton Box	R. R. Shops
Oct. 14	M. P.	300*	70-ton Gondola	R. R. Shops
Oct. 21	N. Y. C.†	1,000	55-ton Hopper	Amer. Car & Fdy.
		1,000	55-ton Hopper	Pullman-Standard
		1,000	70-ton Hopper	General American
		500	70-ton Gondola	Greenville Steel Car
		1,000	70-ton Gondola	Bethlehem Steel
		2,500	Box	Despatch Shops
Oct. 21	West India Fruit & Steamship Co.	150	Box	Amer. Car & Fdy.
Oct. 28	B. & O.	1,000	50-ton Hopper	Amer. Car & Fdy.
		1,000	50-ton Hopper	General American
		1,000	50-ton Hopper	Pullman-Standard
		1,000	50-ton Hopper	Bethlehem Steel
Oct. 28	C. & E. I.	25	Flat	Thrall Car
		25	Cov. Hopper	Thrall Car
Oct. 28	Sunray Oil Corp.	200	10,000-gal. Tank	Amer. Car & Fdy.
Oct. 28	T. & P.	250	70-ton Hopper	Amer. Car & Fdy.
		100	70-ton Cov. Hopper	Amer. Car & Fdy.
		200	50-ton Box	Pressed Steel Car
		100	50-ton Flat	R. R. Shops
		150	70-ton Gondola	R. R. Shops

*250 for the Gulf Coast Lines and 250 for the International-Great Northern.

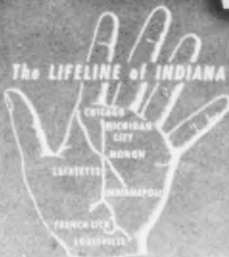
†Affiliated Pittsburgh & Lake Erie will receive 1,000 box cars and 500 gondola cars.

PAGES FROM THE *Monon Record of Progress*

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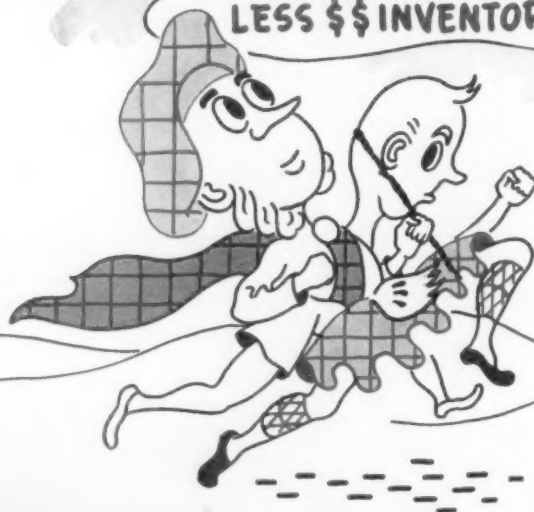
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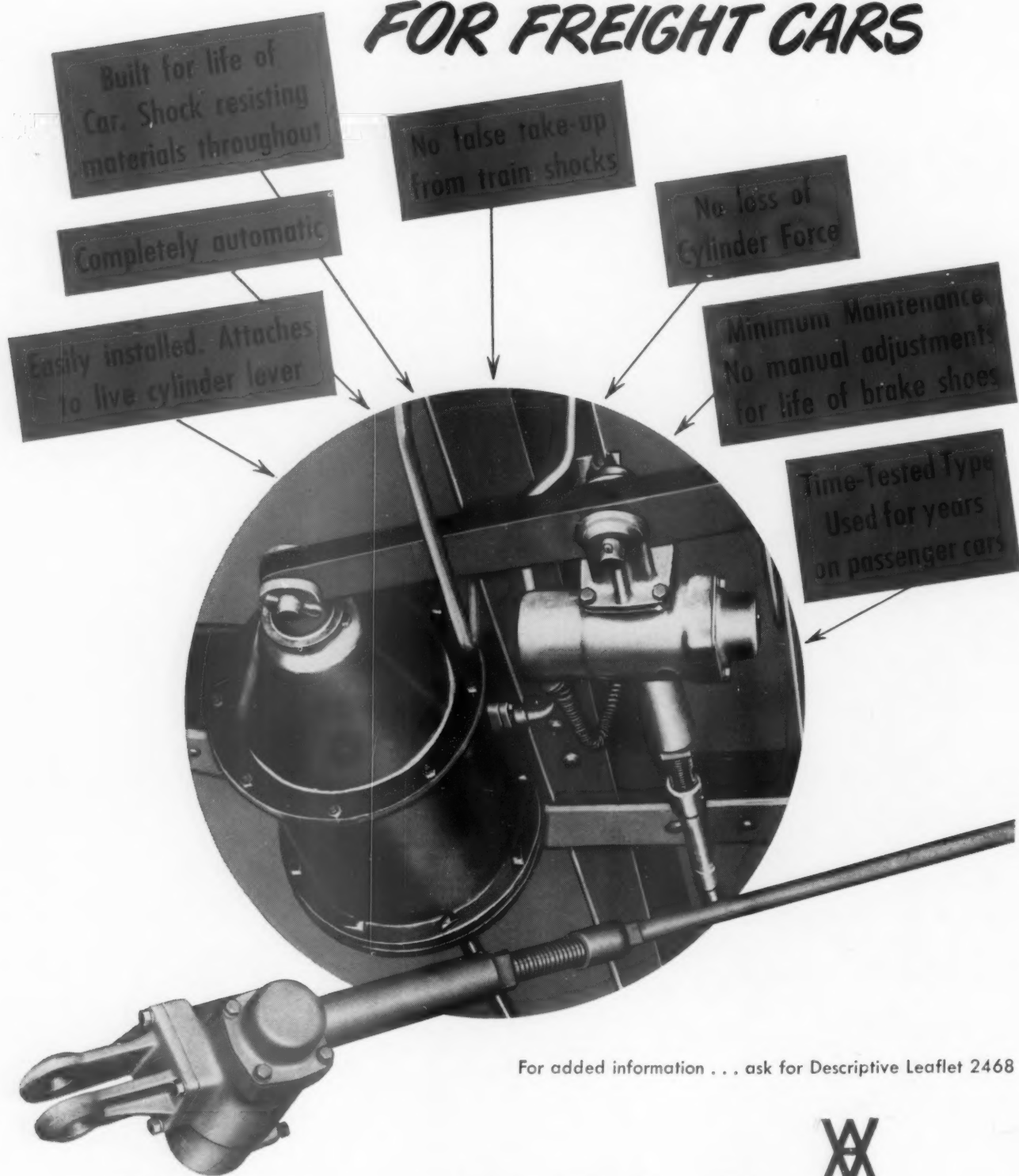
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(Continued from page 88)

hopper bottom coal cars from the Greenville Steel Car Company. The inquiry for all but the box cars was reported in *Railway Age* of September 23, page 56. The road also has increased by 500 the number of 50-ton pulpwood flat cars to be built by the Pullman-Standard Car Manufacturing Company and leased by A.C.L. from the Equitable Life Assurance Society. The leasing of the first 700 pulpwood cars was reported in *Railway Age* of April 8, page 50.

The Great Northern has ordered 1,000 50-ton box cars from its St. Cloud (Minn.) shops and will acquire 100 covered hopper cars from a commercial car builder. Expected to cost \$6,305,000, both groups of cars are scheduled for delivery in 1951.

The Illinois Terminal has ordered 10 50-ton box cars from the American Car & Foundry Co. for delivery in the third quarter of 1951.

The Kansas City Southern has ordered 1,000 freight cars costing about \$5,350,000. Six hundred 70-ton gondola cars will be built by the Pullman-Standard Car Manufacturing Company for delivery in the second quarter of 1951, and 400 50-ton 40½-ft. box cars will be constructed by the American Car & Foundry Co. for delivery beginning next July. An inquiry by this road for 400 box cars was reported in *Railway Age* of May 13, page 68.

The Maine Central has ordered 250 50-ton box cars from the Pullman-Standard Car Manufacturing Company for delivery next March.

The Nashville, Chattanooga & St. Louis has ordered 650 50-ton box cars from the Pullman-Standard Car Manufacturing Company at a cost of \$3,380,000. Delivery is scheduled for mid-1951.

The Northern Pacific has ordered 250 70-ton gondola cars from the American Car & Foundry Co. at an estimated cost of \$1,300,000. Delivery is scheduled for July, 1951. These cars are part of a \$2,500,000 car building program announced in *Railway Age* of September 2, page 95.

The St. Louis-San Francisco has ordered 200 50-ton 41½-ft. gondola cars from the Pressed Steel Car Company for delivery in the second quarter of 1951.

The St. Louis Southwestern intends to order 75 70-ton covered hopper cars from the American Car & Foundry Co. instead of the 25 cars it originally contemplated ordering, as reported in *Railway Age* of September 23, page 56.

The Western of Alabama has ordered 110 50-ton box cars from the Pullman-Standard Car Manufacturing Company at an estimated total cost of

\$572,000. Delivery is scheduled for the third quarter of 1951.

PASSENGER CARS

The New York, Susquehanna & Western has ordered 16 all-stainless steel 130-passenger coaches from the Budd Company at an estimated cost of \$1,222,000. Delivery of the cars, inquiry for which was reported on page 89 of the March 18 *Railway Age*, is expected about mid-1951.

LOCOMOTIVES

The Ann Arbor has ordered 20 Diesel-electric locomotive units from the American Locomotive-General Electric Companies for delivery this month and in December. Included in the order are seven 2-unit 3,200-hp. freight locomotives, two 1,000-hp. road-switching and four 660-hp. switching units.

The Duluth, South Shore & Atlantic has ordered one 1,000-hp. Diesel-electric road-switching locomotive unit from the American Locomotive-General Electric Companies at an estimated cost of \$107,500. Delivery is scheduled for next January. The road's intention to purchase three road-switching units was reported in *Railway Age* of July 29.

The Long Island has ordered four 2,400-hp. and eight 1,600-hp. Diesel-electric locomotive passenger units from Fairbanks, Morse & Co. The request for court permission to purchase this equipment, which is scheduled for delivery next spring, was reported in *Railway Age* of October 14, page 57.

IRON & STEEL

The Great Northern has received authority to buy 39,000 tons of 115-lb. steel rail and accessories.

The Pennsylvania has ordered 96,000 net tons of new steel rail costing \$6,600,000. The orders, placed with the Carnegie-Illinois Steel Corporation, the Bethlehem Steel Company and the Inland Steel Company, call for quantities to be about equally divided among 155-lb., 140-lb. and 133-lb. rail. Delivery will begin in January, 1951.

COMMUNICATIONS

The Washington & Old Dominion has placed an order with Bendix Radio Division for two-way radio equipment, to be used in mainline operations, as well as for expediting switching and transfer service in the Washington, D. C., area. Both freight and passenger trains will be equipped. The W. & O. D. operates from Rosslyn, just outside of Washington, to Purcellville, Va., 45 mi., as well as to Potomac yard at Alexandria, Va. Radio stations will be installed at Bluemont Junction, Vienna, Herndon and Leesburg, on the main line, to

permit way station attendants to contact train crews anywhere on the railroad. The latest type of Bendix equipment will be used on this project — model MRT-5, designed for adjacent-channel service, which makes it possible to operate without interference even in highly congested areas where most of the radio channels assigned to the railroad are in constant use.

CONSTRUCTION

Cincinnati, New Orleans & Texas Pacific.—This road will construct about 2.2 mi. of new team and industrial tracks at Burnside, Ky. The Cincinnati, Burnside & Cumberland River will purchase the new trackage, which it will then lease back to the builder for operation. The new tracks will replace the Burnside company's present facilities, totaling about 2.7 mi., which the commission has authorized the company to abandon. This present trackage will be submerged by the waters of Wolf Creek dam, a project of the Tennessee Valley Authority. Cost of the new construction is estimated at \$137,000.

New York, New Haven & Hartford.—The following projects, at the indicated probable costs, have been authorized by this road: Install gas switch heaters at Devon, Conn. (\$22,425), Oak Point, N. Y. (\$58,000), Hartford Conn. (\$58,400), Boston, Mass. (\$23,000), and Providence, R. I. (\$58,400); steam supply at Springfield, Mass. (\$41,500); and improving roadway drainage at Stonington, Conn. (\$23,300).

Northern Pacific.—A new freight depot for this road is being constructed under contract at Moscow, Ida., by the Hanson & Parr Construction Co., of Spokane, Wash. The building will be 28 ft. by 56 ft., of concrete and brick construction. It will provide space for l.c.l. freight, mail and express, as well as for local freight offices. Expected to cost approximately \$32,000, the new station will be completed early in January.

Puerto Rico.—To aid a growing traffic problem in San Juan, this island's capital, the city's railroad terminus reportedly will be moved to nearby Guaynabo. The new terminal will occupy 42 acres, comprise a 19,200-sq. ft. warehouse, a 41,540-sq. ft. machine shop, offices, and other facilities, reports state. One 35-ton and two 10-ton electric cranes will be included. Occupancy of the new terminal is expected by June 30, 1951. The old terminal, according to plans, will be used as a common center for the island's Transportation Authority and aviation and land transport companies.

Southern.—This road has awarded contracts, at the indicated estimated

costs, to Bernard & Byrd, Inc., New Orleans, La., for a Diesel locomotive repair shop (\$287,500), and to James F. O'Neal Company, New Orleans, for heating and service piping in the new shop (\$27,961), as part of the extension and revision of the Press Street yard, New Orleans (see *Railway Age* of February 18, 1950, page 73). A contract also has been awarded to Armco Drainage & Metal Products, Inc., Dallas, Tex., for a new storage warehouse at New Orleans (\$45,463). The following projects, at the indicated probable costs, have been authorized for the road's own forces: Revising line and grade, including rebuilding ballast deck trestle, near Moundville, Ala. (\$94,200); replacing timber trestle with steel bridge and ballast deck trestle approaches near Greenwood, Ala. (\$67,200); revision of grade, including rebuilding trestle, Edwardsville, Ala. (\$64,300); constructing new industrial switching lead, Chamblee, Ga. (\$53,300); constructing new storage track, Stockbridge, Ga. (\$47,708); revision of grade, including replacing trestle with steel bridge and trestle approaches, near Spring Valley, Ala. (\$41,000); track extension and crossover, Bulls Gap, Tenn. (\$32,640); new 80-car siding, Piney Flats, Tenn. (\$29,161); filling part of, and rebuilding balance of, ballast deck trestle near Morgan, Ala. (\$27,500); Diesel fuel oil facilities, Jacksonville, Fla. (\$26,000); extending passing tracks at Johnston City, Tenn. (\$24,475), and Tasso (\$23,475), and new passing track at Alameda, Ala. (\$22,540).

Texas & Pacific.—This road is considering purchase of 700 open-flame, kerosene-burning switch heaters, most of which would be installed on the Eastern division. Bids to rebuild the road's Mineola, Tex., station were due late in October and construction is expected to begin around November 10.

FINANCIAL

Bangor & Aroostook.—*Collateral Trust Bonds.*—The Reconstruction Finance Corporation is offering for sale \$3,000,000 of this road's collateral trust 4 per cent bonds, due July 1, 1961. A notice issued in connection with the offer said that bids or inquiries regarding the bonds should be addressed to the R.F.C.'s secretary in Washington, D. C. The notice also said that to allow reasonable time to those interested in transmitting bids, final determination as to acceptance of bids received will not be made prior to November 8. These B.&A. bonds are secured by \$6,000,000 of the road's first mortgage 4½ per cent bonds, due July 1, 1976, the notice said.

Central of Georgia.—*Control of Savannah & Atlanta.*—Examiner Paul

C. Albus has recommended in a proposed report that the I.C.C. deny this road's application for authority to acquire control of the 141-mi. S.&A. The Central would acquire this control through its wholly owned subsidiary, Empire Land Company, which would purchase stock control of S.&A.'s parent company, the Port Wentworth Corporation. The latter corporation owns all the common stock and a majority of the preferred stock of the S.&A. (See *Railway Age* of April 29, page 73).

"Since it appears that the transaction will adversely affect the intervening railroads opposing the application, and the public they serve, and since applicants have failed to produce evidence indicating any substantial compensating benefits from the transaction, it has not been shown that the proposal is consistent with the public interest," Examiner Albus said.

Among those opposing the application were the Louisville & Nashville, Georgia Railroad & Banking Company, and the Georgia. The Southern also intervened but withdrew its opposition after public hearings were held. As to the other roads, the examiner found that a "substantial loss of traffic" to the Georgia and the L.&N. would result from the proposed transaction.

The Central had proposed to acquire a loan of \$2,500,000 from the Reconstruction Finance Corporation to help meet the total purchase price of \$3,500,000. In this connection the examiner said it is doubtful whether the venture should be launched by resorting to a governmental agency for the necessary capital. He noted that "valuable assets" would have to be put up as security for such a loan and concluded that "the immediate past financial history of Central indicates that all of its assets may be applied to better use in furnishing adequate transportation service to the public it now serves."

Chicago, Rock Island & Pacific.—*Trackage Rights.*—This road has applied to the I.C.C. for approval of an amended trackage rights agreement with the Union Pacific, covering operations over a segment of U. P. line between Limon, Colo., and Denver. Effect of the proposed amendment would be to increase the Rock Island's annual rental from \$315,061 to \$324,620 per year. The application said the two roads have agreed on a program for lengthening passing tracks on the joint line. This will enable the Rock Island to run longer trains and utilize larger locomotives to greater capacity, the application said.

New York, New Haven & Hartford.—*Purchase of B.&P. Debentures.*—The Metropolitan Life Insurance Company, an intervenor in this case, has petitioned the I.C.C. for an order to take a deposition on oral examination of Frederic C. Dumaine in connection with the latter's ownership of New Haven and Boston & Providence securities. The insurance company also asked that a subpoena be issued to compel

Mr. Dumaine to produce all documentary evidence in his possession or control "relating to the ownership, purchase or acquisition of any rights or interest in or control over any of the outstanding debentures or stock of the Boston & Providence or any of the outstanding preferred stock of the New Haven." The petition suggested that the deposition be taken at Boston, Mass., before I.C.C. Examiner Harvey H. Wilkinson.

At issue in the case is a pending application by the New Haven to purchase a claim against the estate of the B.&P. based upon \$2,170,000 of matured 5 per cent debentures. Mr. Dumaine, who is president and chairman of the board of the New Haven, owns \$2,000,000 of these debentures subject to certain options. (See *Railway Age* of April 8, page 63.)

New Securities

Application has been filed with the I.C.C. by:

MONTOUR.—To issue an unsecured promissory note of \$200,000, proceeds from the sale of which would be used to finance in part three 1,200-hp Diesel-electric switching locomotives costing an estimated \$304,065. The locomotives would be purchased from Electro-Motive Division, General Motors Corporation, at a unit price of \$101,355 each. The promissory note, to be dated December 1, would mature in eight semi-annual installments of \$25,000 each, beginning June 1, 1951. It would be sold by competitive bidding, with the interest rate to be set by such bids.

NEW YORK CENTRAL.—To assume liability for \$4,800,000 of equipment trust certificates, to finance in part 1,000 new freight cars costing an estimated \$6,006,900:

Description and Builder	Estimated Unit Cost
400 70-ton high-side gondolas (Despatch Shops)	\$5,833
100 70-ton high-side gondolas (Despatch Shops)	6,432
500 70-ton high-side gondolas (Greenville Steel Car Company)	6,061

The certificates, to be dated November 15, would mature in 15 annual installments of \$320,000 each, beginning November 15, 1951. They would be sold on the basis of competitive bids, with the interest rate to be set by such bids.

Division 4 of the I.C.C. has authorized:

WESTERN MARYLAND.—To assume liability for \$2,040,000 of series O equipment trust certificates to finance in part 17 Diesel-electric locomotives costing an estimated \$2,567,000. (See *Railway Age* of October 14, page 60.) The certificates, to be dated October 31, will mature in 15 annual installments of \$136,000 each, beginning October 31, 1951. Division 4's report approved a selling price of \$9,1513 with interest at 2½ per cent—the bid of Lee Higginson Corporation—which will make the average annual cost of the proceeds approximately 2.52 per cent. The certificates were reoffered to the public at prices yielding from 1.7 to 2.625 per cent, according to maturity.

Dividends Declared

Cleveland & Pittsburgh.—4½% special guaranteed, 50¢, quarterly; 7% guaranteed, 87½¢, quarterly, both payable December 1 to holders of record November 10.

Great Northern.—\$1, payable December 21 to holders of record November 21.

Illinois Central.—75¢, payable December 11 to holders of record November 8.

Nashville, Chattanooga & St. Louis.—75¢, quarterly, payable December 1 to holders of record November 8.

New York, Chicago & St. Louis.—preferred A, \$10, on arrears, payable December 20 to holders of record November 17.

Norfolk & Western.—75¢, quarterly, extra, 50¢, both payable December 8 to holders of record November 9.

Pennsylvania.—50¢, payable November 30 to holders of record November 6.

Reading.—4% non-cumulative 1st preferred, 50¢, quarterly, payable December 14 to holders of record November 22.

Richmond, Fredericksburg & Potomac.—6% guaranteed preferred, 75¢, semiannual; 7% guaranteed preferred, 87½¢, semiannual, both payable November 1 to holders of record October 31.

Southern.—common, 75¢; 5% non-cumulative preferred, \$1.25, quarterly, both payable December 15 to holders of record November 15.

Western of Alabama.—\$4, irregular, payable December 15 to holders of record December 5.

Security Price Averages

	Oct. 31	Last week	Last year
Average price of 20 representative railways stocks	46.92	49.17	38.64
Average price of 20 representative railway bonds	94.55	95.10	87.96

Investment Publications

[The surveys listed herein are, for the most part, prepared by financial houses for the information of their customers. Knowing that many such surveys contain valuable information, *Railway Age* lists them as a service to its readers, but assumes no responsibility for facts or opinions which they may contain bearing upon the attractiveness of specific securities.]

Baker, Weeks & Harden, One Wall st., New York 5.

Kansas City Southern Railway 4% Non-Cumulative Preferred. October 25.

Missouri Pacific First & Refunding Bonds. October 9.

R. W. Pressprich & Co., 48 Wall st., New York 5.

Railroad Equipment Maturities 1951-1953 vs. Annual Depreciation and Amortization Charges.

Vilas & Hickey, 49 Wall st., New York 5.

Missouri - Kansas - Texas Preferred Stock. October 20.

Railroad Income Mortgage Bonds. October 20.

Western Maryland Railway. Proposed Modification of Capital Stock. October 13.

RAILWAY OFFICERS

EXECUTIVE

N. M. Lawrence, superintendent of the PENNSYLVANIA's Buffalo division, which was consolidated with the Renovo division on November 1 to form a new Northern division, has been appointed assistant to the vice-president of the Central region, with headquarters as before at Buffalo, N. Y.

Holly Stover, who has been appointed assistant to the president of the CHICAGO, BURLINGTON & QUINCY, as reported in the October 14 *Railway Age*, was born on March 12, 1883, at Beckley, W. Va. He entered railroad service at the age of 14 as a telegrapher for the Chesapeake & Ohio, leaving that road in 1906 to enter the coal business, eventually becoming head of the Stover Smokeless Coal Company and of Holly Stover, Inc. He became a director of the Gulf, Mobile & Ohio when it was formed by consolidation of the Gulf, Mobile & Northern and the Mobile & Ohio in September, 1940. With the onset of World War

II he was appointed executive representative and associate director of the office of Defense Transportation at Washington, D. C., and while holding that position, was elected vice-president of the G. M. & O. In January, 1943, Mr. Stover was made federal manager



Holly Stover

of the Toledo, Peoria & Western, holding that position until October, 1944, when he was elected president of the Chicago & Eastern Illinois. He retired as president of the C. & E. I. in June, 1947.

T. A. Tweedy has been appointed assistant to vice-president of the NORFOLK & WESTERN at Roanoke, Va., as reported in the *Railway Age* of October 21. Mr. Tweedy is a native of Prospect, Va. He joined the N. & W. in July, 1916, as clerk in the office of the superintendent of the Pocahontas division at Bluefield, W. Va. After serv-



T. A. Tweedy

ing in World War I, he returned to the office of the general superintendent of the Western general division in November, 1919, and three years later became clerk in the motive power department at Roanoke. In 1923 he transferred to the office of the general claim agent, and in June, 1924, became secretary to the assistant general freight agent. In 1929 Mr. Tweedy was appointed secretary to the vice-president and was promoted to chief clerk in that

office in October, 1937. He held the latter position until his recent appointment as assistant to the vice-president.

FINANCIAL, LEGAL & ACCOUNTING

D. S. Dugan, who has been advanced to general solicitor of the PULLMAN COMPANY, with headquarters at Chicago, as reported by *Railway Age* on October 7, is a graduate of the University of Virginia Law School. He started with Pullman in 1941 as special representative in the industrial relations department. In World War



D. S. Dugan

II he served in the Navy as a lieutenant from December, 1942, to January, 1946. Upon his return from service, he became assistant to supervisor of industrial relations, and in August, 1946, was transferred to the law department as attorney. Mr. Dugan was appointed assistant general solicitor in 1947, which position he held prior to his promotion.

L. A. Ekart, joint facility accountant in the office of the auditor of disbursements of the LOUISVILLE & NASHVILLE at Louisville, Ky., has been appointed to the newly-created position of assistant auditor of disbursements at that point.

Gordon D. Briggs, assistant to the president for finance and assistant general counsel of the BANCOR & AROOSTOOK, and assistant clerk of the corporation, has been appointed general counsel and elected clerk of the corporation, succeeding **Henry J. Hart**, whose health no longer permits him to perform the duties of those offices. Mr. Hart temporarily will retain his position as vice-president of the company. **John E. Hess**, attorney, has been appointed assistant general counsel and assistant clerk of the corporation.




















R. H. Ely has been appointed auditor of disbursements of the DELAWARE & HUDSON at Albany, N. Y., succeeding **O. H. Faus**, who has retired (Continued on page 98)

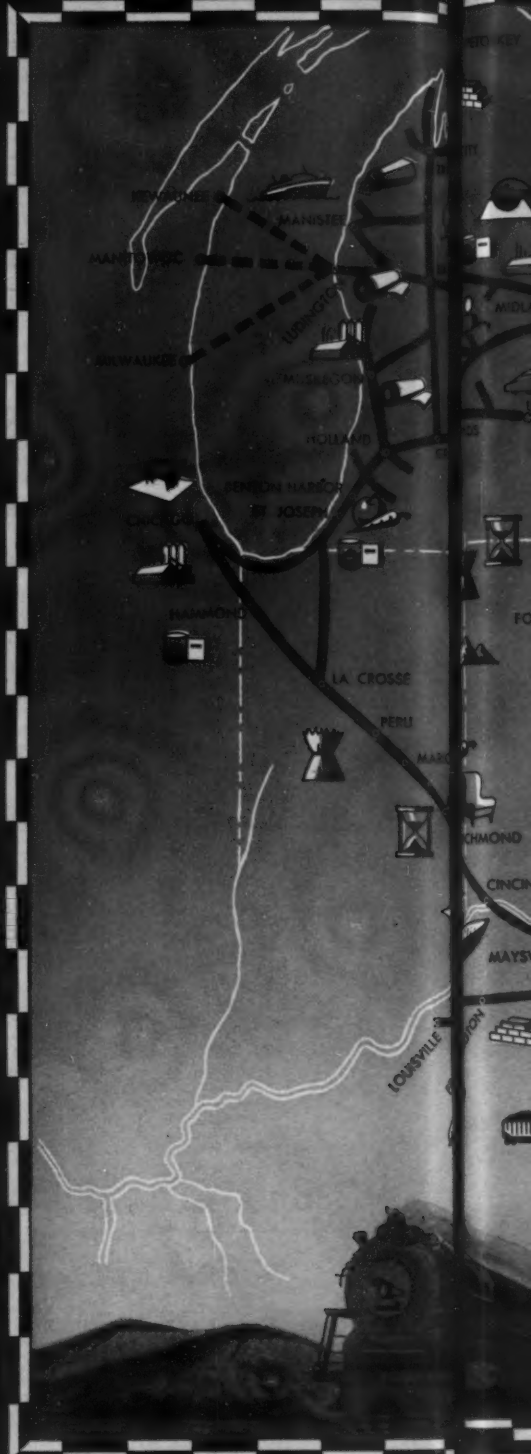
THE C HESSIE ROUTE FOR FAST FREIGHT

**5,000
MILES OF
SERVICE**

**BETWEEN THE
GREAT LAKES AND
THE ATLANTIC**

Principal Products carried by C&O

-  Coal and Coke
-  Sand, Gravel
and Stone
-  Salt
-  Lumber
and Forest Products
-  Petroleum
and Products
-  Ores
and Concentrates
-  Iron
and Steel Products
-  Motor Vehicles
and Parts
-  Building Materials
-  Household Furniture
and Equipment
-  Glass
and Glass Articles
-  Paper
and Pulp Products
-  Chemicals
and Explosives
-  Food Products
-  Livestock
and Packing House
Products
-  Grain
and Grain Products
-  Fruits
and Vegetables
-  Tobacco
and Products
-  Fertilizer



This map-picture of The Chessie Route for Fast Freight illustrates why so many shippers prefer the convenient dependable "via C&O" freight services. Directly serving nine states—Virginia, West Virginia, Kentucky, Ohio, Indiana, Illinois, Michigan, Wisconsin, New York—the District of Columbia and the Province of Ontario, Chesapeake and Ohio Railway provides strategic "service routes to, from and through America's great industrial area.

Put the Chessie Route for Fast Freight to work



Notice a few of the C&O service routes preferred by service-minded shippers:

- The "Carferry Route" across Lake Michigan and the Chicago-Buffalo gateway route connect New England and the industrial east with the mid-west and northwest territory.
- The "Expediter" route provides service appropriate to its name from Wisconsin, Michigan, Illinois and Ohio to the Virginia cities, the Carolinas and the southeast.
- The frequent dusk-to-dawn short-line service between Chicago and Cincinnati.
- The overnight service between Detroit—Grand Rapids—Chicago.
- The "Clinchfield Route," via Elkhorn City, furnishes double manifest service in each direction between Florida and the southeast, and industrial mid-America.
- The dollar-saving route for export and import through the Port of Newport News.



CHESAPEAKE AND OHIO RAILWAY

For you; you'll enjoy freight transportation at its best.

(Continued from page 95)

after many years of service. Mr. Faus was born on March 25, 1879, at Cherokee, Iowa, and attended the public schools of Minnesota. He entered railroad service in 1895 with the Chicago, Rock Island & Pacific and served that road until 1917 as call boy, timekeeper, chief clerk to master mechanic, accountant, chief clerk to superintendent and transportation inspector, successively, at various locations. In 1917 he joined the D. & H. and served successively as division accountant, office auditor, assistant to auditor of disbursements and auditor of disbursements.

John F. Reilly, assistant general attorney of the DELAWARE, LACKAWANNA & WESTERN at New York, has been promoted to general attorney.

J. L. Heywood, assistant comptroller of the PENNSYLVANIA at Philadelphia, Pa., has been appointed also chief cost analyst.

OPERATING

D. F. Wengert, superintendent of the California division of the UNION PACIFIC, at Los Angeles, Cal., has been promoted to general superintendent of the South-Central district, at Salt Lake City, Utah. **V. W. Smith**, who has been on special assignment with the Railway Labor Board at Chicago, as reported in the October 21 *Railway*



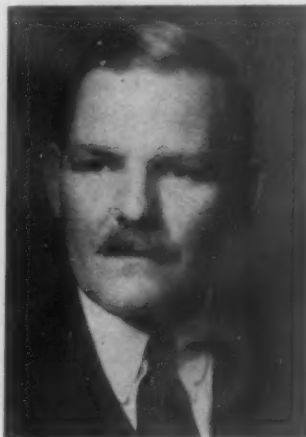
D. F. Wengert

Age, succeeds Mr. Wengert. **O. A. Durrant**, trainmaster at Ogden, Utah, has been appointed assistant superintendent at Green River, Wyo., succeeding **C. J. Colombo**, whose promotion to superintendent of the Wyoming division was reported in the October 21 *Railway Age*. **B. W. Collins**, trainmaster at Nampa, Idaho, succeeds Mr. Durrant.

Mr. Wengert was born on September 14, 1905, at Austin, Minn. He entered U. P. service in 1924 as a brakeman at Los Angeles, and in 1934 was transferred to Las Vegas, Nev. He was promoted to conductor at the latter point in 1937, and two years later be-

came trainmaster there. In 1943 Mr. Wengert went to Salt Lake City as terminal superintendent of the Utah division, returning to Las Vegas in 1945 as assistant superintendent. His next move was back to Salt Lake City in April, 1946, to act as superintendent of the Utah division, which position he held until October of that year, when he again returned to Las Vegas as assistant superintendent. He was advanced to superintendent of the California division in December, 1947.

Robert A. J. Morrison has been appointed assistant general manager of the READING at Reading, Pa. Mr. Morrison was born at Cincinnati, Ohio, on December 12, 1898, and was graduated from Yale in 1920. During World War I he was a lieutenant in field artillery. Mr. Morrison entered the service of the Baltimore & Ohio on July 1, 1921, in the division engineer's office at Dayton, Ohio, and from 1926 to 1941 was a trainmaster at Garrett, Ind., Newark, Ohio, and Massillon, and



Robert A. J. Morrison

Pittsburgh, Pa., successively. From January to October, 1941, he served as assistant superintendent at Pittsburgh, becoming superintendent at Wheeling, W. Va., in the latter month. On June 1, 1944, he was transferred to the Monongahela division and on June 1, 1948, to the Cumberland division, where he remained until his recent appointment on the Reading, which was announced in the *Railway Age* of October 28.

F. B. Grim, assistant superintendent of the ATCHISON, TOPEKA & SANTA FE at San Bernardino, Cal., has retired after more than 45 years of service with that road. He is succeeded by **A. K. Johnson**, trainmaster at Fresno, Cal. **Harold G. Wood**, trainmaster at Winslow, Ariz., succeeds Mr. Johnson, and is in turn replaced by **B. O. Bernard**, general yardmaster at Barstow, Cal.

As reported in the October 21 *Railway Age*, **Ed H. Bailey**, superintendent of the UNION PACIFIC's Wyoming division, at Cheyenne, Wyo., has been promoted to general superintendent of

the Eastern district, with the same headquarters, and **C. J. Colombo**, assistant superintendent at Green River, Wyo., has been appointed as his successor. Born on September 13, 1904, at Elmo, Mo., Mr. Bailey attended high school at Kenta, Colo., and began railroading in August, 1922, as a helper in the U. P.'s car department at Cheyenne. Since then he has served continuously with the same road in various positions, including brakeman, stationmaster and special agent. From 1938 to 1940, he served as trainmaster on the



Ed H. Bailey

2nd district at Grand Island, Neb., and on the 5th and 6th subdivisions at Laramie, Wyo., subsequently becoming assistant superintendent at Grand Island. Later he was transferred to Green River in the same capacity, and in July, 1945, was promoted to superintendent, in which position he served successively on the Nebraska and Wyoming divisions.

Mr. Colombo entered U. P. service in 1914, at the age of 15, as an engine crew caller. After holding several clerical positions, he served successively as a brakeman, conductor and traveling conductor. Later he was advanced to trainmaster, and prior to his recent promotion acted as assistant superintendent at Green River.

R. L. Linihan, general agent of the RAILWAY EXPRESS AGENCY at Tulsa, Okla., has been promoted to superintendent of the Nebraska-Wyoming division, at Omaha, Neb.

Frank H. Dugan, trainmaster of the West Side (New York) freight line of the NEW YORK CENTRAL, has been appointed assistant superintendent of the New York Terminal district at New York.

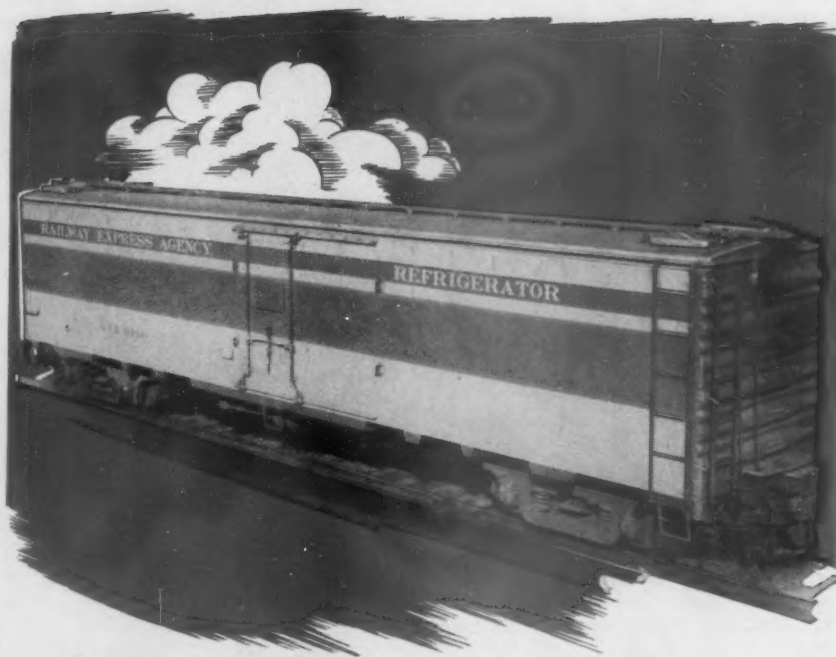
C. H. Hardwick, superintendent of the Arkansas division of the CHICAGO, ROCK ISLAND & PACIFIC, at Little Rock, Ark., has been transferred in that capacity to the Des Moines division, with headquarters at Des Moines, Iowa. He succeeds **F. R. Weston**, who has been moved to the Western division at Fairbury, Neb., to replace **R. W.**

Anderson, who becomes Mr. Hardwick's successor. **H. V. Brown**, assistant superintendent of the Cedar Rapids division, at St. Paul, Minn., has been promoted to superintendent of the Oklahoma division, at El Reno, Okla.

Fred W. Ferguson, superintendent of the Northern division of the St. Louis Southwestern, at Pine Bluff, Ark., has been promoted to general superintendent of the system, with headquarters at Tyler, Tex., succeeding **W. V. Keith**, who, at his own request, has been relieved of his duties due to ill health. Advanced to succeed Mr. Ferguson is **J. Leland Humphreys**, assistant superintendent at Illmo, Mo. **Joseph A. Haley**, terminal trainmaster at East St. Louis, Ill., succeeds Mr. Humphreys, and is in turn replaced by **John M. Lee**, chief yard clerk at Shreveport, La.

Continuing system-wide modernization of its operations to fit present day requirements, the PENNSYLVANIA made several changes in its operating department on November 1. Five grand divisions — Eastern Ohio, Western Pennsylvania, Northern, Eastern Pennsylvania and Southern — were eliminated and the positions of general superintendents were discontinued. The Reno and Buffalo divisions were combined to form the new Northern division, with headquarters at Buffalo, N. Y.; and the Toledo division was discontinued, with the line from Toledo Junction, Ohio, just west of Mansfield, to Toledo and Detroit, Mich., becoming part of the Eastern division, with headquarters at Pittsburgh, Pa., under **Henry D. Kruggel**, superintendent, and the Sandusky branch being consolidated with the Columbus division, under **William H. Mapp**, superintendent at Columbus, Ohio.

J. L. Cranwell, general superintendent of the Western Pennsylvania grand division, has been advanced to assistant general manager of the Central region, a new position; with headquarters as before at Pittsburgh. **J. B. Jones**, general superintendent of the Eastern Ohio grand division, has been promoted to general superintendent of transportation of the Central region, a newly created post, also with headquarters as before at Pittsburgh. **Walter O. Teufel**, general superintendent of the Northern grand division at Buffalo, N. Y., has been named assistant chief of motive power at Philadelphia, Pa., to succeed **R. G. Bennett**, who has been granted a leave of absence until his retirement becomes effective on January 1, 1951. **A. J. Greenough**, general superintendent of the Eastern Pennsylvania grand division at Harrisburg, Pa., has been appointed general superintendent of transportation of the Eastern region at Philadelphia. **J. A. Schwab**, general superintendent of the Southern grand division at Wilmington, Del., has been appointed assistant general manager of

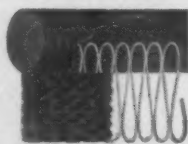


NEW Railway Express Jumbo Refrigerator Cars Have Main Doors and Hatches Weatherstripped with

Bridgeport
INNER-SEAL

The last word in refrigerated transport, the Railway Express new Jumbo size refrigerator cars are weatherstripped with Bridgeport Inner-seal. This modern gasket material, unique in design, provides positive insulation around main doors and hatches. Inner-seal consists of a live, sponge rubber bead, molded for life to a flexible flange woven of spring steel wire and tough cotton thread. For heavy duty installations such as railway cars the weatherstrip is coated all over with neoprene, the synthetic rubber that resists the ravages of abrasion, sunlight, oil, heat and cold. And, it's so easy to handle that any careful workman can install Inner-seal even around compound curves and in tight corners.

Inner-seal is helping to protect vital equipment, to assure safe transport of perishables and to increase passenger and crew comfort on the latest type locomotives, freight cars and passenger coaches operated by leading railroads throughout the nation. Full information on Inner-seal sizes, shapes and colors will be sent on request.



Tough spring steel wire
molded for life into live
sponge rubber

Bridgeport
FABRICS, INC.

BRIDGEPORT 1, CONN.
Est. 1837

the Eastern region at Philadelphia. **E. P. Adams**, superintendent of the Renovo division at Erie, Pa., has been transferred to the newly created Northern division at Buffalo. **Harold L. Kimble**, superintendent of the Toledo division, has been transferred to the Chicago division at Chicago, succeeding **J. D. Fuchs**, who has been promoted to general superintendent of transportation of the Western region at Chicago. **William G. Pfohl**, assistant superintendent of freight transportation of the Central region at Pittsburgh, has been appointed to the new post of assistant superintendent of the Eastern division at Toledo, Ohio.

John D. Henley has been appointed trainmaster of the SOUTHERN at Columbia, S. C., succeeding **Newton B. Lewis**.

P. G. Shepherd, assistant superintendent of the Huntington division of the CHESAPEAKE & OHIO, has been appointed superintendent of that division, with headquarters as before at Huntington, W. Va., succeeding **S. H. Pulliam**, who has been appointed general superintendent—personnel at Cleveland, Ohio. **O. W. Draper**, terminal trainmaster at Elk, W. Va., succeeds Mr. Shepherd as assistant superintendent at Huntington.

J. D. Henry, trainmaster of the PENNSYLVANIA at Erie, Pa., has been appointed general superintendent of the LAKE TERMINAL at Lorain, Ohio. Mr. Henry was born in Indiana county, Pa., and received his higher education at the University of Pennsylvania. He entered railroad service in 1920 with the P.R.R. at Philadelphia as trainman and subsequently advanced to assistant yardmaster, yardmaster, assistant trainmaster and trainmaster. His supervisory work included service at Enola, Pa., and Harrisburg; Fort Dix, N. J.; Louisville, Ky.; Toledo, Ohio, and Cincinnati; Pittsburgh, Pa.; Youngstown, Ohio; and New Castle, Pa. In 1946 Mr. Henry became trainmaster of the P.R.R. at Erie, in which capacity he was serving at the time of his appointment to the Lake Terminal.

TRAFFIC

Frank H. Candler, assistant to general freight agent of the SOUTHERN, has been promoted to assistant general freight agent, with headquarters as before at Cincinnati, Ohio. **James C. Cook**, chief clerk to general industrial agent, has been promoted to industrial agent, with headquarters as before at Atlanta, Ga.

Arthur R. Walton, assistant freight traffic manager of the ERIE, has been appointed freight traffic manager, with headquarters as before at New York, succeeding **John T. McEntee**, deceased. **George W. Madsen**, assistant general freight agent at Chicago, has been appointed assistant freight traffic manager at New York, succeeding Mr. Walton. **Lawrence J.**

Burgott, assistant general eastern freight agent at New York, succeeds Mr. Madsen at Chicago. **Edwin W. Keiley**, general agent at San Francisco, Cal., has been appointed assistant general eastern freight agent at New York, to succeed Mr. Burgott. **Walter E. Reager** has been appointed general agent at Portland, Ore., to succeed **Harold F. Keelen**, who has been transferred to San Francisco, to replace Mr. Keiley.

B. D. Joiner has been appointed general agent of the SEABOARD AIR LINE at Augusta, Ga., succeeding **J. E. Wilheit**, deceased.

Earl P. Russell, executive general agent of the ILLINOIS CENTRAL at Jackson, Miss., has retired after 55 years of continuous service.

MECHANICAL

William C. Cox, who has been promoted to electrical engineer, Pere Marquette district, of the CHESAPEAKE & OHIO at Grand Rapids, Mich., as reported by *Railway Age* on October 7, was born in West Branch, Mich., on August 23, 1887. Mr. Cox received his



William C. Cox

higher education at Michigan State College, where he studied engineering. Prior to entering railroad service he was employed as an electrical engineer with the Portland (Ore.) Light & Power Co., the Wilson Mining Company, Kokomo, Colo., and the Holly (Mich.) Light & Power Co. In December, 1914, he joined the Pere Marquette (now P. M. district, C. & O.) as lead electrician at its Ionia shops. Mr. Cox was appointed electrical supervisor in charge of passenger car lighting at Bay City, Mich., in 1915, and three years later became power plant engineer at Wyoming shops, Grand Rapids. He held the latter post before his promotion.

In the interest of administrative efficiency and centralized supervision of its rapidly expanding Diesel-electric locomotive program, the PENNSYLVANIA has announced changes in personnel,

effective November 1. **J. W. Horine, Jr.**, assistant electrical engineer, has been appointed general superintendent, motive power—Diesel, with headquarters as before at Philadelphia, Pa. This is a new position. Mr. Horine will supervise Diesel maintenance over the entire system. **J. S. Bell**, superintendent of motive power of the former Eastern Pennsylvania grand division, has been appointed superintendent of motive power—Diesel of the Eastern region, with headquarters as before at Harrisburg, Pa. **G. S. Webb**, superintendent of motive power of the former Southern grand division at Wilmington, Del., has been appointed superintendent of motive power of the Eastern region at Philadelphia. **J. E. Wightman, Jr.**, superintendent motive power of the old Western Pennsylvania grand division, has been appointed superintendent of motive power—Diesel of the Central region, with headquarters as before at Pittsburgh, Pa. **C. W. Whistler**, superintendent motive power of the former Eastern Ohio grand division, has been appointed superintendent motive power of the Central region, with headquarters as before at Pittsburgh. **W. S. Plummer**, master mechanic of the Lake division at Cleveland, Ohio, has been transferred to the Pittsburgh and Conemaugh divisions at Pitcairn, Pa., succeeding **W. J. Fulton**, advanced to superintendent motive power—Diesel of the Western region at Columbus, Ohio. **J. J. Quinn**, assistant master mechanic of the Pittsburgh and Conemaugh divisions, succeeds Mr. Plummer at Cleveland. **J. F. Hunt**, supervisor of Diesel-electric locomotives on the Western region, has been appointed assistant superintendent of the Altoona (Pa.) works. **K. H. Gordon**, assistant electrical engineer at Philadelphia, succeeds Mr. Horine, with the same title as heretofore. **S. V. Smith**, assistant engineer in the office of the electrical engineer at Philadelphia, has been appointed assistant electrical engineer, to succeed Mr. Gordon.

John O. Rose, general foreman at the LOUISVILLE & NASHVILLE's Corbin (Ky.) shops, has been advanced to master mechanic at Corbin, succeeding the late **H. B. Feather**.

R. P. Rennie, assistant chief chemist of the CANADIAN NATIONAL, has been appointed chief chemist at Montreal, Que., succeeding **E. T. Hurley**, who has been appointed assistant controller of tests and materials research, at Montreal.

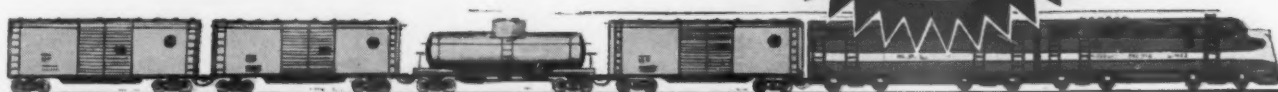
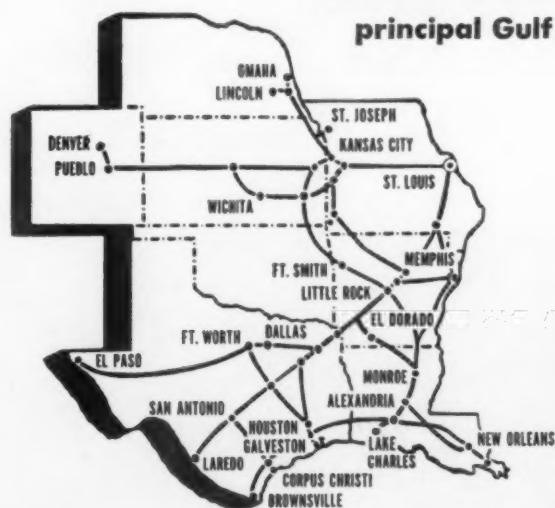
ENGINEERING & SIGNALING

O. J. Sutton, supervisor of telegraph, Western district, of the MISSOURI PACIFIC LINES, at Kansas City, Mo., has retired. He is succeeded by **Adolph Highfill**, Southern district telegraph supervisor at Little Rock, (Continued on page 105)



When you specify "MO-PAC", you are assured of modern rail transportation at its best. Specialized handling plus the finest in facilities result in reliable, on-time delivery.

MISSOURI PACIFIC's fleet of powerful diesels serves eleven states in the rich, productive West-Southwest and ten principal Gulf ports from New Orleans to Brownsville.



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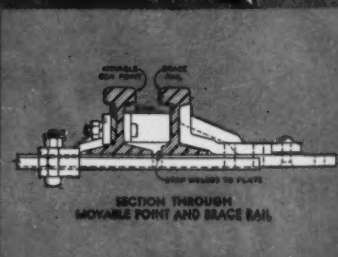
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RAMAPO AJAX DIVISION

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(Continued from page 100)

Ark. **Walter William Schmidt**, telephone maintainer at Jefferson City, Mo., succeeds Mr. Highfill.

F. W. Campbell, division engineer of the Belleville division of the CANADIAN NATIONAL at Belleville, Ont., has been appointed district engineer of the Montreal district at Montreal, Que., succeeding **H. K. Morrison**, who has retired after many years of service.

C. A. Ashbaugh, assistant engineer of the ATCHISON, TOPEKA & SANTA FE at Galveston, Tex., has retired.

Edmond R. Murphy, division engineer of the St. Lawrence, Adirondack and Ottawa divisions of the NEW YORK CENTRAL at Watertown, N. Y., has been transferred to the Electric division at New York, succeeding **Frank G. Smith**, who has retired after 40 years of service. **Clarence C. Lathey**, assistant division engineer of the Syracuse division at Syracuse, N. Y., succeeds Mr. Murphy as division engineer at Watertown. **William R. Denish**, supervisor of track on the Pennsylvania division at Jersey Shore, Pa., has been appointed assistant division engineer of the St. Lawrence division at Watertown, succeeding **John V. Middleton**, who has been transferred to Syracuse.

C. W. Van Nort, engineer maintenance of way of the former Western Pennsylvania grand division of the PENNSYLVANIA, and **G. A. Williams**, engineer maintenance of way of the former Eastern Ohio grand division, have been appointed engineers maintenance of way of the Central region at Pittsburgh, Pa. **W. W. Boyer**, engineer maintenance of way of the old Northern grand division, has been appointed engineer maintenance of way of the Western region at Chicago. **F. P. Filippelli**, engineer maintenance of way of the former Eastern Pennsylvania grand division, and **P. X. Geary**, engineer maintenance of way of the former Southern grand division, have been appointed engineers maintenance of way of the Eastern region, with headquarters at Harrisburg, Pa., and Wilmington, Del., respectively. These changes follow abolition of the five grand divisions, as noted elsewhere in this issue.

SPECIAL

J. Don Parel has been named manager of agricultural relations in the public relations department of the ASSOCIATION OF AMERICAN RAILROADS. Before joining the staff of the A.A.R., Mr. Parel was associated director of the Washington office of the American Farm Bureau Federation.

S. H. Pulliam, superintendent of the Huntington division of the CHESAPEAKE & OHIO at Huntington, W. Va., has been appointed general superintendent—personnel at Cleveland, Ohio.

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Mr. Pulliam was born at Richmond, Va., on November 20, 1894, and was graduated from Episcopal High School, Alexandria, Va., before starting on his railroad career in the survey department of the Baltimore & Ohio in 1912. He later attended the School of Business Administration of Harvard University, joining the C.&O. as division engineer in 1924. Entering World War II in 1943, Mr. Pulliam was commissioned a lieutenant colonel and served as commanding officer of the 740th



S. H. Pulliam

Railway Operating Battalion, and later of the 710th Railway Grand Division. In 1945 he was assigned to the Military Government of Korea and put in charge of operation and maintenance of Korean railways, being discharged with the rank of colonel in 1946. After the war Mr. Pulliam returned to the C.&O. as assistant superintendent of the Huntington division and was promoted to superintendent in 1947.

OBITUARY

Albert Shaw, President of L. & H.R., Dies at Warwick

Albert Shaw, president and general manager of the Lehigh & Hudson River, with headquarters at Warwick, N. Y., died in St. Anthony's Hospital in that city on October 30, after a heart attack, at the age of 66.

Mr. Shaw was born at Williamsport, Pa., on June 12, 1884, and entered railroad service on March 20, 1904, as a rodman on the New York Central at Corning, N. Y. In 1905 he joined the Philadelphia & Reading (now the Reading) as rodman, and the following year became assistant supervisor, which position he held successively at Tamaqua, Pa., Philadelphia and Lansdale. In 1912 Mr. Shaw became supervisor at Shamokin, Pa., and in 1920, joint assistant trainmaster at Newberry Junction, Pa., with the Philadelphia & Reading. Mr. Shaw was appointed superintendent of the L. & H.R. at Warwick in 1926; general superintendent in December, 1928; vice-president and general manager on January

1, 1939; and president and general manager on January 1, 1940.

John Edward Whitney, 71, who retired six years ago as eastern traffic manager of the ILLINOIS CENTRAL at New York, died on October 31 at his home in Northport, Long Island, N. Y.

Carl C. Pitcher, chief of yard and terminal operations of the BALTIMORE & OHIO at Baltimore, Md., died of a heart attack on October 25, at the age of 57.

John Alexander Lynch, who retired as general freight agent of the TEXAS & PACIFIC at Dallas, Tex., in April, 1947, died on October 22, at the age of 69.

Charles Drayton Moss, late general manager of the CLINCHFIELD, at Erwin, Tenn., whose death was reported in the October 7 *Railway Age*, was born in Herbert, S. C., on March 13, 1884. He entered railroad service in 1898 with the Southern, and in 1900 joined the Seaboard Air Line. From



Charles Drayton Moss

1901 to 1909, Mr. Moss served with the Norfolk & Western, subsequently becoming employed by the Clinchfield as train dispatcher. He later held the positions successively of chief dispatcher, trainmaster, superintendent and general superintendent. Mr. Moss became general manager in November, 1945.

Walter Marshall Taylor, traffic manager of the RICHMOND, FREDERICKSBURG & POTOMAC at Richmond, Va., died on October 15. Mr. Taylor was born at Richmond on February 6, 1882, and entered railroad service in 1900 with the R.F.&P. as clerk in the freight station at Richmond, subsequently serving as ticket seller for the R.F.&P. and the Atlantic Coast Line at Richmond. He then served the Seaboard Air Line as city ticket agent at Richmond and clerk in the general passenger department at Norfolk. Returning to the R.F.&P., he became traveling freight and passenger agent, chief clerk in the traffic department and assistant to traffic manager, successively. He was promoted to traffic manager on January 1, 1947.

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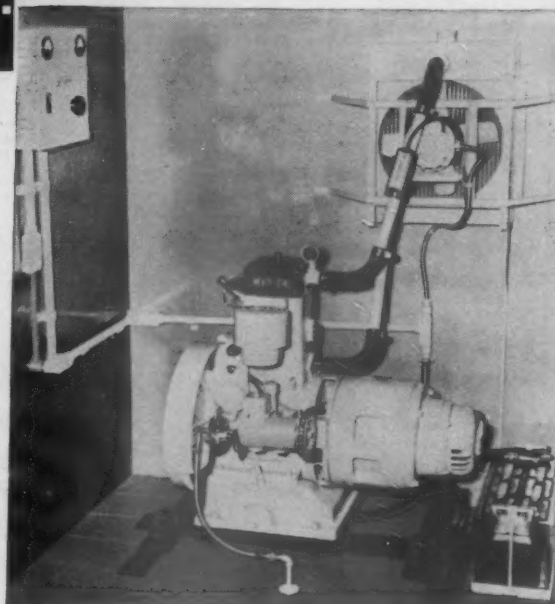
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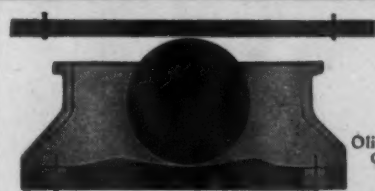
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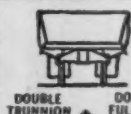
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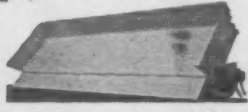


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Freight Operating Statistics of Large Steam Railways — Selected

Region, Road and Year		Miles of road operated	Locomotive Miles			Car-Miles		Ton-Miles (thousands)		Road-locom. on line				
			Train-miles	Principal and helper	Light	Loaded (thousands)	Per cent loaded	Gross excl. locos. & tenders	Net rev. and non-rev.	Serviceable		B.O.	Per Cent B.O.	
New England Region	Boston & Maine.....	1950	1,700	255,153	263,645	13,588	10,154	70.7	622,811	265,393	89	4	14	13.1
	1949	1,701	254,255	260,568	11,970	9,050	66.9	567,232	230,814	78	14	16	14.8	
	N. Y., N. H. & Hfd.....	1950	1,771	281,566	282,577	27,741	11,014	68.5	683,379	309,842	102	7	12	10.5
	1949	1,774	249,109	249,929	21,742	9,894	65.0	609,723	253,077	107	7	10	8.1	
	Delaware & Hudson.....	1950	794	237,095	280,604	28,076	10,168	70.9	702,992	374,494	138	35	20	10.4
Great Lakes Region	1949	794	221,065	261,905	27,210	9,034	64.6	632,444	313,259	115	61	16	8.3	
	Del., Lack. & Western.....	1950	965	276,296	293,505	29,337	11,899	69.3	778,809	351,567	81	2	35	29.7
	1949	966	250,158	283,328	33,131	10,905	65.2	734,410	315,243	100	17	38	24.5	
	Erie.....	1950	2,231	665,317	687,697	48,887	34,234	66.6	2,218,209	898,525	187	3	39	17.0
	1949	2,231	598,086	614,446	44,471	31,236	64.5	2,022,141	778,320	185	55	38	13.7	
	Grand Trunk Western.....	1950	971	273,951	280,418	2,667	9,434	64.6	648,744	281,535	55	..	11	16.7
	1949	971	230,728	237,478	2,111	7,583	63.6	498,909	198,190	53	2	8	12.7	
	Lohigh Valley.....	1950	1,238	244,885	258,258	24,705	11,982	70.3	808,279	390,642	47	5	24	31.6
	1949	1,239	236,254	255,670	31,163	11,076	65.2	784,266	369,096	60	15	23	23.5	
	New York Central.....	1950	10,691	3,022,057	3,182,244	186,686	109,322	62.8	7,560,769	3,333,521	957	65	361	26.1
Central Eastern Region	1949	10,680	2,748,480	2,907,117	162,899	96,327	60.8	6,583,312	2,838,827	903	218	338	23.2	
	New York, Chic. & St. L.....	1950	2,162	738,354	754,622	10,759	28,841	66.7	1,942,360	867,044	194	4	50	20.2
	1949	2,162	693,040	708,439	8,001	25,716	64.1	1,761,643	725,725	186	42	47	17.1	
	Pitta. & Lake Erie.....	1950	221	87,314	90,583	363	3,724	70.7	304,643	188,690	30	..	16	34.8
	1949	221	67,090	68,370	..	2,515	65.7	220,666	133,461	22	9	15	32.6	
	Wabash.....	1950	2,381	581,720	590,259	9,676	24,111	70.1	1,511,596	620,997	151	9	61	27.6
	1949	2,381	619,548	628,606	10,242	21,997	66.6	1,422,642	580,081	152	12	41	21.0	
	Baltimore & Ohio.....	1950	6,086	1,787,492	2,154,984	233,194	58,587	63.4	4,726,067	2,288,861	684	31	254	26.2
	1949	6,086	1,581,715	1,896,248	209,476	56,749	61.1	4,257,431	1,991,780	717	86	274	25.4	
	Central of New Jersey.....	1950	410	69,381	69,903	5,153	2,722	66.6	202,346	105,921	37	..	5	11.9
Central Western Region	1949	415	62,307	62,451	4,003	2,247	62.4	167,727	82,977	27	2	6	17.1	
	Central of Pennsylvania.....	1950	212	69,413	77,851	13,730	2,768	68.4	204,069	110,708	36	..	18	33.3
	1949	212	62,006	66,628	9,088	2,287	62.2	171,704	86,314	29	3	19	37.3	
	Chicago & Eastern Ill.....	1950	886	128,079	128,079	2,405	4,735	69.9	295,804	136,971	25
	1949	909	113,638	113,965	2,914	3,931	67.0	256,506	116,328	29	13	18	30.0	
	Elgin, Joliet & Eastern.....	1950	238	95,604	96,879	..	3,507	69.3	267,928	148,932	36	..	4	10.0
	1949	238	80,818	81,130	..	2,815	66.7	213,115	114,440	34	..	..	..
	Pennsylvania System.....	1950	10,009	3,214,746	3,511,665	410,609	136,717	65.9	9,626,090	4,710,660	1,262	4	381	23.1
	1949	10,039	2,745,505	3,046,686	347,127	112,134	61.9	8,151,160	3,809,306	1,283	182	417	22.2	
	Reading.....	1950	1,315	338,748	349,007	27,448	13,196	68.0	1,009,821	555,615	174	24	37	15.7
Poca-hontas Region	1949	1,323	317,383	330,398	27,129	10,689	61.3	831,480	424,660	149	55	45	18.1	
	Western Maryland.....	1950	837	166,029	190,447	20,447	5,805	65.3	463,113	257,442	138	28	13	7.3
	1949	836	150,991	173,814	17,999	4,843	62.1	393,505	212,185	135	32	12	6.7	
	Chesapeake & Ohio.....	1950	5,045	1,376,983	1,464,391	58,957	57,298	58.5	4,757,702	2,588,030	497	21	139	21.2
	1949	5,041	1,143,763	1,196,651	43,928	44,531	50.5	3,618,684	1,918,497	505	78	113	16.2	
Southern Region	1950	2,105	616,251	641,561	37,799	27,531	59.2	2,339,235	1,236,704	234	87	29	9.7	
	1949	2,107	546,538	572,953	33,705	22,924	58.8	1,915,568	998,315	220	92	35	10.1	
	Atlantic Coast Line.....	1950	5,480	721,255	722,286	10,544	20,680	65.3	1,395,118	639,413	313	16	90	21.5
	1949	5,507	706,053	713,809	12,470	17,425	60.5	1,227,053	539,640	326	32	76	17.5	
	Central of Georgia.....	1950	1,783	269,359	273,314	4,379	7,044	70.7	455,634	212,665	98	2	10	9.1
	1949	1,783	235,096	236,743	3,791	6,168	69.3	403,555	186,400	97	4	11	9.8	
	Gulf, Mobile & Ohio.....	1950	2,851	326,667	326,667	283	15,646	73.2	990,653	462,742	61	..	4	6.2
	1949	2,854	311,210	311,313	176	14,160	70.0	935,571	436,154	67	20	22	20.2	
	Illinois Central.....	1950	6,543	1,453,929	1,458,844	52,615	52,196	65.3	3,652,158	1,691,891	554	17	85	13.0
	1949	6,543	1,289,372	1,292,509	43,578	44,210	60.8	3,080,078	1,370,814	508	58	92	14.0	
Northwestern Region	Louisville & Nashville.....	1950	4,770	1,084,464	1,158,284	30,830	33,010	64.2	2,402,699	1,214,746	329	29	119	24.9
	1949	4,765	1,055,024	1,124,944	26,985	27,490	62.9	1,953,400	976,724	288	101	79	16.9	
	Nash., Chatt. & St. Louis.....	1950	1,049	208,161	210,689	3,459	6,283	74.6	385,496	179,435	69	..	1	1.4
	1949	1,049	172,281	173,905	2,851	5,366	72.3	331,922	150,376	64	70	40	11.3	
	Seaboard Air Line.....	1950	4,136	610,147	615,784	3,368	20,101	65.6	1,359,086	616,479	243	70	36	11.7
	1949	4,138	578,717	583,909	4,354	17,189	60.6	1,233,770	546,721	213	39	197	35.6	
	Southern.....	1950	6,320	1,144,156	1,152,566	14,411	38,260	70.4	2,400,303	1,084,668	351	39	197	33.6
	1949	6,382	1,094,136	1,099,530	12,610	32,397	65.8	2,102,504	892,988	389	121	174	25.4	
	Chicago & North Western.....	1950	7,998	941,609	953,712	24,362	35,361	65.7	2,469,302	1,060,830	287	8	111	27.3
	1949	8,073	933,064	975,471	24,489	29,940	63.1	2,141,620	913,170	330	34	93	20.4	
Central Western Region	Chicago Great Western.....	1950	1,441	110,732	110,850	3,148	6,181	74.2	385,450	176,849	34	..	1	2.9
	1949	1,445	156,086	156,432	5,895	8,022	68.0	513,405	218,493	32	2	1	2.9	
	Chic., Milw., St. P. & Pac.....	1950	10,663	1,318,059	1,372,901	51,314	50,922	66.7	3,391,155	1,520,299	437	43	74	13.4
	1949	10,663	1,319,211	1,366,891	49,968	44,169	61.9	3,113,937	1,362,279	438	83	73	12.3	
	Chic., St. P., Minn. & Omaha.....	1950	1,606	211,611	218,235	9,341	6,504	71.2	429,664	193,992	78	..	33	29.7
	1949	1,606	205,038	214,660	10,399	5,319	67.0	370,945	163,891	83	4	21	19.4	
	Duluth, Missabe & Iron Range.....	1950	563	195,268	196,622	1,526	10,016	50.4	1,020,282	616,834	50	..	2	3.8
	1949	574	179,995	180,950	1,494	9,524	51.5	966,557	583,471	40	..	1	2.4	
	Great Northern.....	1950	8,220	776,953	773,825	31,606	31,955	64.6	2,445,560	1,271,883	328	86	59	12.5
	1949	8,222	1,012,724	1,007,428	41,925	41,378	62.4	3,204,731	1,596,304	339	68	53	11.5	
Southwestern Region	Minneapolis, St. P. & S. St. M.....	1950	4,179	402,295	407,357	3,911	14,681	70.0	953,932	462,424	105	..	14	11.8
	1949	4,179	379,034	382,493	3,708	12,162	65.4	815,065	378,296	116	..	16	12.1	
	Northern Pacific.....	1950	6,608	891,165										

Items for the Month of July 1950 Compared with July 1949

Region, Road and Year	Freight cars on line			Per Cent B.O.	G.t.m. per train-hr. excl. locos. and tenders		Net ton-mi. per train-mile	Net ton-mi. per car-mile	Net ton-mi. per car-day	Car-miles per car-day	Net daily ton-mi. per road-mi.	Train-miles per train-hour	Miles per loco. per day	
	Home	Foreign	Total											
New Eng. Region	Boston & Maine.....	1,699	9,083	10,782	4.5	38,252	2,446	1,042	26.1	793	42.9	5,036	15.7	91.3
	1949	3,171	6,851	10,022	3.9	35,969	2,237	910	25.5	717	42.1	4,377	16.1	82.9
	1950	1,704	18,025	19,729	1.4	35,607	2,433	1,103	28.1	519	27.0	5,644	14.7	94.7
	1949	2,522	13,082	15,604	3.0	36,908	2,450	1,017	25.6	507	30.5	4,602	15.1	74.6
Great Lakes Region	Delaware & Hudson.....	2,719	7,301	10,020	7.7	55,029	2,978	1,586	36.8	1,205	46.1	15,215	18.6	53.7
	1949	6,032	5,153	11,185	7.2	50,746	2,873	1,423	34.7	885	39.5	12,727	17.7	51.3
	Del., Lack. & Western.....	5,842	11,377	17,219	10.9	44,143	2,882	1,301	29.5	656	32.0	11,752	15.7	97.9
	1949	8,287	8,553	16,840	7.3	42,307	2,980	1,279	28.7	605	32.4	10,527	14.4	76.5
	Erie.....	7,764	22,249	30,013	4.9	58,076	3,359	1,361	26.2	952	54.5	12,992	17.4	114.8
	1949	13,185	16,771	29,956	10.4	56,651	3,407	1,312	24.9	842	52.4	11,254	16.8	82.5
	Grand Trunk Western.....	4,124	11,252	15,376	6.3	47,527	2,391	1,038	29.8	590	30.6	9,353	20.1	150.0
	1949	5,334	7,770	13,104	11.8	43,214	2,176	864	26.1	499	30.0	6,584	20.0	133.2
	Lehigh Valley.....	4,407	11,117	15,524	9.2	63,429	3,367	1,627	32.6	837	36.5	10,179	19.2	123.2
	1949	9,865	9,657	19,522	12.7	60,199	3,395	1,598	33.3	639	29.4	9,610	18.1	102.7
	1950	59,278	107,871	167,149	8.9	42,728	2,545	1,122	30.5	644	33.6	10,058	17.1	85.5
	1949	74,374	77,529	151,903	8.6	41,466	2,433	1,049	29.5	599	33.5	8,574	17.3	75.5
Central Eastern Region	New York, Chic. & St. L.....	6,013	20,453	26,466	4.3	49,001	2,677	1,195	30.1	975	53.9	10,828	18.4	91.1
	1949	10,785	13,365	24,150	4.1	46,728	2,576	1,061	28.2	975	53.9	10,828	18.4	91.1
	1950	4,873	10,848	15,721	18.1	48,758	3,497	1,166	50.7	382	10.7	27,542	14.0	69.8
	1949	7,044	8,582	15,626	11.8	49,212	3,289	1,989	53.1	287	8.2	19,481	15.0	49.5
	1950	6,669	14,042	20,711	3.5	53,966	2,623	1,078	25.8	981	54.3	8,413	20.8	94.4
	1949	7,961	12,001	19,962	3.2	47,380	2,325	948	26.4	909	51.7	7,859	20.6	105.7
	Baltimore & Ohio.....	28,819	52,033	80,852	11.9	36,676	2,698	1,306	39.1	894	36.1	12,132	13.9	81.5
	1949	61,170	32,724	93,894	11.2	36,927	2,748	1,286	35.1	671	31.3	10,557	13.7	65.1
	Central of New Jersey.....	806	9,510	10,316	7.3	36,951	3,015	1,578	38.9	345	13.3	8,334	12.7	89.5
	1949	1,232	7,840	9,072	8.2	38,417	2,803	1,387	36.9	279	12.1	6,450	14.3	93.4
	1950	1,321	4,475	5,796	13.2	42,207	3,137	1,702	40.0	623	22.8	16,845	14.4	65.4
	1949	2,176	3,438	5,614	12.5	39,373	2,946	1,481	37.7	515	21.9	13,134	14.2	55.4
Poca-hontas Region	Chicago & Eastern Ill.....	1,388	3,386	4,774	11.9	41,267	2,316	1,072	28.9	829	41.0	4,987	17.9	186.9
	1949	3,536	3,501	7,037	11.7	37,014	2,263	1,026	28.9	553	27.9	4,128	16.4	66.8
	1950	6,154	12,843	18,997	2.1	22,099	2,915	1,620	42.5	253	8.6	20,186	7.9	103.8
	1949	6,850	8,335	15,185	3.6	22,295	2,797	1,502	40.7	236	8.7	15,511	8.5	98.9
	1950	98,152	126,632	224,784	14.7	44,988	3,102	1,518	34.5	673	29.6	15,182	15.0	83.8
	1949	146,035	85,590	231,625	13.5	44,454	3,056	1,428	34.0	531	25.3	12,240	15.0	62.9
	Reading.....	11,341	22,678	34,019	9.0	37,695	2,982	1,641	42.1	544	19.0	13,630	12.6	63.5
	1949	16,435	13,439	29,874	7.6	34,536	2,623	1,339	39.7	462	19.0	10,354	13.2	54.6
	1950	3,661	3,431	7,092	2.8	39,025	2,870	1,595	44.3	1,215	42.0	9,922	14.0	41.0
	1949	7,967	3,127	11,114	1.2	36,973	2,651	1,430	43.8	662	24.3	8,187	14.2	37.3
	Chesapeake & Ohio.....	45,082	30,630	75,712	7.0	59,287	3,501	1,904	45.2	1,081	40.9	16,548	17.2	79.0
	1949	64,804	22,821	87,625	7.2	53,183	3,188	1,690	43.1	703	27.9	12,277	16.8	62.6
Southern Region	Norfolk & Western.....	23,232	7,799	31,031	2.8	63,599	3,837	2,028	44.9	1,307	49.2	18,952	16.8	79.9
	1949	40,692	6,525	47,217	6.1	58,675	3,543	1,846	43.5	688	26.9	15,284	16.7	63.3
	Atlantic Coast Line.....	10,952	14,776	25,728	4.6	32,106	1,945	892	30.9	795	39.4	3,764	16.6	62.4
	1949	13,716	10,950	24,666	6.2	29,620	1,744	767	31.0	711	38.0	3,161	17.0	57.8
	Central of Georgia.....	2,223	4,954	7,177	5.5	30,592	1,700	793	30.2	939	44.0	3,848	18.1	86.7
	1949	3,477	4,384	7,861	8.3	29,893	1,724	796	30.2	759	36.3	3,372	17.4	73.4
	Gulf, Mobile & Ohio.....	3,451	10,651	14,102	2.8	59,499	3,042	1,421	29.6	1,050	48.5	5,236	19.6	175.7
	1949	4,832	8,765	13,597	2.6	57,341	3,009	1,403	30.8	1,044	48.4	4,930	19.1	90.3
	Illinois Central.....	18,777	29,459	48,236	3.6	46,814	2,539	1,176	32.4	1,106	52.2	8,341	18.6	79.1
	1949	26,046	25,282	51,328	2.0	44,021	2,414	1,074	31.0	893	47.4	6,758	18.4	69.5
	1950	28,260	14,586	42,846	12.5	36,461	2,223	1,124	36.8	913	38.7	8,215	16.5	85.8
	1949	43,724	11,757	55,481	5.0	31,169	1,859	929	35.5	580	26.0	6,612	16.8	83.4
Northwestern Region	Nash, Chatt. & St. Louis.....	1,838	4,713	6,551	5.1	38,036	1,858	865	28.6	868	40.7	5,518	20.5	106.4
	1949	3,316	3,399	6,715	12.1	38,025	1,934	876	28.0	702	34.7	4,624	19.7	88.4
	1950	8,356	13,129	21,485	2.3	39,663	2,270	1,030	30.7	916	45.5	4,808	17.8	65.6
	1949	10,981	9,293	20,274	3.4	37,700	2,170	962	31.8	857	44.4	4,262	17.7	69.5
	1950	13,219	27,306	40,525	2.4	36,290	2,114	955	28.3	870	43.6	5,536	17.3	68.9
	1949	18,642	25,452	44,094	5.3	33,764	1,934	821	27.1	660	37.0	4,514	17.6	56.6
	Chicago & North Western.....	18,773	37,605	56,378	3.3	41,735	2,741	1,177	30.0	610	31.0	4,279	15.9	86.1
	1949	23,102	29,503	52,605	3.1	35,809	2,417	1,030	30.5	577	30.0	3,649	15.6	76.7
	Chicago Great Western.....	1,148	6,552	7,700	2.5	60,816	3,501	1,606	28.6	1,079	50.8	3,959	17.5	112.4
	1949	2,274	5,250	7,524	7.2	53,912	3,293	1,401	27.2	975	52.5	4,878	16.4	112.5
	1950	26,056	38,223	64,279	3.0	42,186	2,598	1,165	29.9	764	38.3	4,599	16.4	89.3
	1949	33,301	29,857	63,158	2.3	38,374	2,380	1,041	30.8	715	37.5	4,121	16.3	82.7
Central Western Region	Chic., St. P., Minn. & Omaha.....	971	9,087	10,058	3.1	27,644	2,101	948	29.8	631	29.7	3,897	13.6	72.6
	1949	945	7,967	8,912	2.9	24,480	1,925	850	30.8	610	29.6	3,292	13.5	72.9
	1950	13,060	1,582	14,642	2.4	88,844	5,432	3,284	61.6	1,355	43.7	35,343	17.0	143.5
	1949	14,329	383	14,712	3.7	92,036	5,606	3,384	61.3	1,255	39.8	32,790	17.1	163.3
	1950	22,132	18,801	40,933	4.5	47,496	3,190	1,659	39.8	993	38.6	4,991	15.1	60.2
	1949	24,475	20,559	45,034	3.4	48,702	3,196	1,592	38.6	1,181	49.0	6,263	15.4	80.5
	1950	5,592	9,204	14,796	8.3	43,143	2,395	1,161	31.5	1,011	45.8	3,569	18.2	121.1
	1949	7,515	6,662	14,177	4.1	38,563	2,159	1,002	31.1	871	42.8	2,920	17.9	105.7
	1950	17,386	16,662	34,048	7.7	48,571	2,907	1,389	31.7	1,136	50.1	5,985	16.9	87.1
	1949	20,771	14,043	34,814	6.3	46,495	2,750	1,248	32.7	986	45.9	5,175	17.0	81.3
	Atch., Top. & S. Fe (incl. G. C. & S. F. and P. & S. F.).....	44,180	34,583	78,763	5.0	56,958	2,804	1,049	25.5	1,161	69.6	7,153	20.4	119.5
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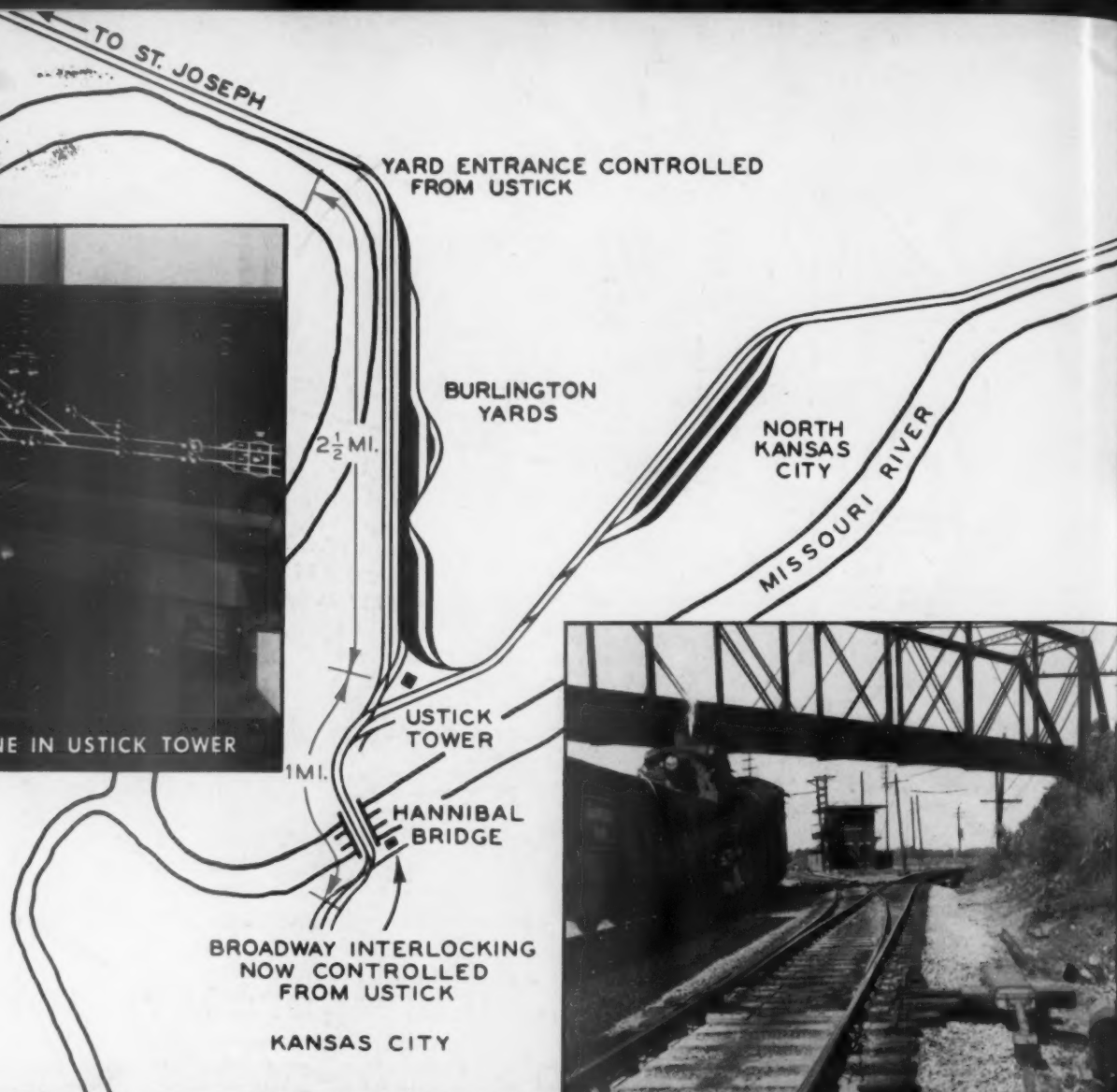
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